

Studies in the History of Philosophy of Mind 12

Simo Knuuttila
Juha Sihvola *Editors*

Sourcebook for the History of the Philosophy of Mind

Philosophical Psychology
from Plato to Kant

 Springer

Sourcebook for the History of the Philosophy of Mind

STUDIES IN THE HISTORY OF PHILOSOPHY OF MIND

Volume 12

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Editors

Sourcebook for the History of the Philosophy of Mind

Philosophical Psychology from Plato to Kant

 Springer

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Chapter 1

Introduction

Simo Knuuttila

Philosophy of mind and philosophical psychology, which are characterized by a wide variety of objects of interest as well as by connections with recent developments in cognitive science, evolutionary psychology, and computation, form one of the leading areas of contemporary philosophical research. This quickly growing branch is accompanied by an increasing number of studies on psychological theories in history, before the emergence of psychology as an independent science in the nineteenth century. While the study of philosophical psychology is regarded as a valuable part of the history of philosophy as such, it is also considered a particularly stimulating resource for dealing with many issues in the philosophy of mind. Historical perspectives may improve our understanding of philosophical questions by shedding light on the origin of prominent conceptual assumptions such as the various notions of cognition, intention, emotion, or volition, but it may also do this by contrasting our ways of thinking with quite different approaches in history, thus adding to the awareness of the conceptual presumptions of both positions, for example some ancient theories of consciousness or medieval views of perception.

This work aims to be helpful for philosophers who are interested in the history of the philosophy of mind and philosophical psychology from Plato to Kant. Divided into fourteen chapters, which correspond to the main themes in history, it includes a collection of texts in English translation which the authors regard as relevant to know for those interested in the subject. Chapters are divided into ancient, medieval Latin and Arabic, and early modern sections. Each section has a concise introduction which explains the main ideas with references to a number of basic texts; these are translated and thematically ordered after the introductory part. The idea is that one may easily see how an issue in philosophical psychology, for example perception, is dealt in the philosophical tradition beginning from ancient Greek and Latin

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philosophy, and which kinds of historical texts illustrate past discussions. Following the introductions and translations, there are some further explanations, scholarly remarks, and references to research literature. These are meant to serve those who would like to know more about the texts quoted or have a scholarly interest in the topic. Explanations are more or less extensive depending on how known the texts are.

Plato was concerned with psychological phenomena in many works, but it was Aristotle who established this research as a branch of natural philosophy in his *De anima* and the collection of treatises called *Parva naturalia*. In the first part of *De anima*, Aristotle explains the nature of the soul. The rest of the book consists of his accounts of the functions of the soul.¹ This division has shaped the history of the philosophy of mind considerably. The studies of the soul as such are traditionally conducted in terms of metaphysical and ontological considerations, whereas the discussions of mental phenomena are often connected with introspection, behavioural observations about humans and animals and rational reconstructions of ordinary experiences. This roughly corresponds to the terminological division between ‘philosophy of mind’ as dealing with the metaphysics and epistemology of mind and ‘philosophical psychology’ as covering a broader interest in the conceptual aspects of psychology. The metaphysical questions of the nature of the soul or soul-body relationship are attended to in the present work as well, since they have impacted the investigation of empirically recognizable functions of the soul in historical sources. However, the primary subject is the analysis of the treatment of psychological phenomena. The main reason for putting the accent on the psychological capacities and functions is that the historical sources on these issues are less known than the metaphysical theories of the nature of the soul which are extensively studied in the history of philosophy.²

This volume was first planned at the ‘History of Mind’ centre for the study of philosophical psychology in history which included research groups for ancient philosophy, medieval Latin and Arabic philosophy, and early modern philosophy, funded by the Finnish National Research Council ‘Academy of Finland’, the University of Helsinki, and the University of Jyväskylä. The research of this unit is being continued by the centre for the history of moral psychology and politics, which is preparing an extensive volume on the psychology of morality and politics in history. As distinct from this, the present volume concentrates on the analysis of

¹E. Wagner (ed.), *Essays in Plato's Psychology* (Lanham: Lexington Books, 2001); M.C. Nussbaum and A.O. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford: Clarendon Press, 1995). For some further works on philosophical psychology in Plato and Aristotle, see H. Lorenz, *The Brute Within: Appetitive Desire in Plato and Aristotle* (Oxford: Oxford University Press, 2006); M. Pakaluk and G. Pearson (eds.), *Moral Psychology and Human Action in Aristotle* (Oxford: Oxford University Press, 2011).

²For some recent works, see J.P. Wright and P. Potter (eds.), *Psyche and Soma: Physicians and Metaphysicians on the Mind-Body Problem from Antiquity to Enlightenment* (Oxford: Oxford University Press, 2000); T. Crane and S. Patterson (eds.), *History of the Mind-Body Problem* (London: Routledge, 2000); T.M. Lennon and R.J. Stainton (eds.), *The Achilles of Rationalist Psychology*, *Studies in the History of Philosophy of Mind* (Dordrecht: Springer, 2008).

cognitive, conative, and affective mental capacities and their functions, dysfunctions, and typologies in human beings and, to some extent, in animals.

The themes addressed are those which mostly figure in the history of Western philosophical psychology. While many of them are found in some form in the works of Plato and Aristotle, there are also various new questions in ancient and medieval Latin and Arabic works, as well as new styles and theories in early modern thought. The tradition of philosophy deriving from ancient Greek thought is not simply a chain of interpretations of earlier positions. While this popular picture dismissed the breaks and transformations, it is not entirely wrong. It is a historical fact that our knowledge of ancient philosophical works is based on medieval manuscripts. Many of the Greek works copied were translated into Latin and Arabic in the Middle Ages, and a great number of Greek texts and their Latin translations were printed in Renaissance times. Since antiquity, the works which continued to be studied have shaped the intellectual discussion in the context of their reception in various ways. Let us take a look at the main layers of the sources of the philosophy of mind in this tradition.

After Plato and Aristotle, there were some 300 years from which the philosophical sources are preserved merely as fragmentary later quotations. The situation has been somewhat better in this respect since the time of Cicero and Seneca. Despite the differences in the psychological studies of Hellenistic philosophical schools of Platonists, Stoics, Epicureans, and Sceptics, one may discern similarities in what was regarded as worthy of treatment: perception, thought, emotion, choice, action, and the nature of mind.³ Many issues in Hellenistic philosophy continued to be worked upon in imperial and late antiquity. The Post-Hellenistic works of Philo, Plutarch, Alcinous, Epictetus, Marcus Aurelius and others were not very well known in medieval times because of the lack of translations, except the Latin works of Cicero and Seneca, but they began to be studied in the Renaissance period. The physiological aspect of psychological phenomena was addressed in the medical philosophy of Galen (129–199), which later influenced medieval Arabic medicine and medieval and Renaissance Latin medicine.⁴ Three major works of ancient physiognomy were those of Pseudo-Aristotle (third century BCE), Polemon (second century CE), known through Adamantius's fourth-century paragraph and an Arabic translation, and a late ancient work by an anonymous Latin author called *Anonymus Latinus*.⁵

In the first century, Aristotle's works began to be studied as well, after a long period of neglect. Alexander of Aphrodisias (c. 200) wrote an Aristotelian treatise

³For Hellenistic philosophical psychology, see J. Annas, *Hellenistic Philosophy of Mind* (1992) and A.A. Long and D.N. Sedley, *Hellenistic Philosophers*, vol. I: Translations of principal sources with philosophical commentary, vol. II: Greek and Latin texts with notes and bibliography (Cambridge: Cambridge University Press, 1987).

⁴See R.J. Hankinson (ed.), *The Cambridge Companion to Galen* (Cambridge: Cambridge University Press, 2008).

⁵S. Swain (ed.), *Seeing the Face, Seeing the Soul. Polemon's Physiognomy from Classical Antiquity to Medieval Islam* (Oxford: Oxford University Press, 2007).

on the soul; his commentaries on Aristotle's *De anima* and minor psychological tracts have not survived, except the commentary on *De sensu*. Late ancient philosophy was greatly influenced by the Neoplatonist psychology of Plotinus (c. 205–270), and it came to play a significant role in medieval and Renaissance thought as well. Many late ancient philosophers concentrated on arguing for the harmony between Plato and Aristotle from a Neoplatonist point of view. The surviving late ancient works on Aristotle's *De anima* include a paraphrase by Themistius and two longer commentaries traditionally attributed to Simplicius and Philoponus – the authorship of the former and the third book of the latter are questioned by contemporary scholars – as well as commentaries on Plato by Proclus and others.⁶ Nemesius of Emesa's Platonist *De natura hominis* (c. 400) reports on the psychological views of various ancient schools; its Latin translation was used in early medieval times, as well as Calcidius' Latin commentary on Plato's *Timaeus* (c. 400). Some philosophical views on the soul and its functions are discussed in Boethius's *Consolatio philosophiae* and his commentaries on Aristotle's *De interpretatione* which were widely used in the Middle Ages. Augustine's very influential works combined Neoplatonist psychological ideas and Christian philosophical theology.⁷

In the ninth century, many ancient sources of psychology were translated into Arabic, such as Plato's *Timaeus* and *Republic*, Aristotle's *De anima* and *Parva naturalia* with the commentaries by Alexander of Aphrodisias, Themistius' paraphrase of *De anima*, parts of Plotinus' *Enneads* under the title *Theology of Aristotle*, Polemon's work on physiognomy, and pseudo-Aristotle's *Physiognomonics*.⁸ The two most advanced Arabic works on psychology were the sixth book of Avicenna's *Shifa'*, often called Avicenna's *De anima*, which combined Aristotelian and Neoplatonic motifs, and Averroes's commentary on Aristotle's *De anima*. Both were extensively studied in medieval Latin philosophy. Many of Galen's works and other ancient medical treatises were translated into Arabic. This tradition was continued in Arabic medicine which had a strong impact on Latin medicine in general and on the physiological aspect of psychology through eleventh- and twelfth-century translations.⁹

Aristotle's *De anima* was translated from the Greek into Latin by James of Venice before the middle of the twelfth century and again by William of Moerbeke in the 1260s. Michael Scot translated it from the Arabic in early thirteenth century. William of Moerbeke also translated the third book of Philoponus' commentary on *De anima* and Themistius' paraphrase. Some of Aristotle's psychological treatises

⁶R. Sorabji, *The Philosophy of the Commentators, 200–600 AD. A Sourcebook. Vol. I: Psychology (with Ethics and Religion)* (Ithaca, NY., Cornell University Press, 2005).

⁷G. O'Daly, *Augustine's Philosophy of Mind* (Berkeley: University of California Press, 1987).

⁸See D. Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society* (New York: Routledge, 1998); C. D'Ancona, 'Le traduzioni di opera greche e la formazione del corpus filosofico arabo' in C. D'Ancona (ed.), *Storia della filosofia nell'Islam medievale*, vol. 1 (Turin: Einaudi, 2005), 180–258.

⁹L.I. Conrad, 'The Arab-Islamic Medical Tradition' in L.I. Conrad, M. Neve, V. Nutton, R. Porter, A. Wear, *The Western Medical Tradition: 800 BC to AD 1800* (Cambridge: Cambridge University Press, 1995), 93–138.

included in the *Parva naturalia* were translated in the twelfth century and all of them by William of Moerbeke in the 1260s. *De anima* was Aristotle's most copied work in the Middle Ages.¹⁰ The first Latin commentaries on Aristotle's *De anima*, written in the 1240s, were followed by many others since the work was included in the university teaching of natural philosophy in 1250s.¹¹ Before Aristotle came to dominate, Avicenna's *De anima* was widely studied.¹² It also influenced early commentaries on Aristotle's work, as did Averroes's *Long Commentary on De anima*, which only survives in Latin translation. The former was translated about 1160 by Avendauth and Gundissalinus and the latter about 1225 by Michael Scot. Latin twelfth- and thirteenth-century discussions of the soul and its faculties also had a link to ancient theories through Augustine's works and Nemesius of Emesa's *De natura hominis* (c. 400), translated by Alfano of Salerno about 1080 and again by Burgundio of Pisa about 1165, as well as through John Damascene's *De fide orthodoxa*, which is dependent on Nemesius of Emesa, also translated by Burgundio of Pisa about 1153. Among the sources of Latin discussions of the medical aspect of psychology were the medical encyclopedia of 'Alī ibn al-'Abbās, which was partially translated by Constantine the African under the title *Pantegni* in late eleventh century and completely by Stephen of Antioch (*Liber totius medicinae* or *Liber regalis*) in 1127. Further Latin translations of medical works relevant for psychology included Abū Bakr al-Rāzī's (Rhazes) *Liber ad almansorem* and Avicenna's *Canon of Medicine*, both translated by Gerard of Cremona about 1175. Some parts of the physiognomies of Polemon and Pseudo-Aristotle were known in the Latin West through the *Anonymus Latinus*. The Pseudo-Aristotelian *Physiognomy* was translated into Latin in 1260s. Physiognomy was also addressed in the *Secretum secretorum*, an eighth century Arabic work which was partially translated into Latin in the early twelfth century and completely c. 1230. There are 350 surviving medieval Latin manuscripts of this very heterogeneous work.¹³

While medieval psychology was widely shaped by ancient sources, there were also new ideas and approaches. These included the Avicennian theory of the faculties of the soul and the functions of the internal senses, detailed analyses of the relationship between active and passive factors in perception and intellection, the discussions of the nature of theoretical intellect much influenced by Averroes, and late medieval theories of mental language, will as a free cause, self-awareness, and the passions of the intellect.

A great number of new Latin translations of ancient Greek philosophical texts were produced in the fifteenth and sixteenth centuries. While the early printed

¹⁰Bernard G. Dod counts 144 surviving manuscripts of James of Venice's translation, 62 of Michael Scot's translation, and 268 of William of Moerbeke's translation; see 'Aristoteles Latinus' in N. Kretzmann, A. Kenny, J. Pinborg (eds.), *The Cambridge History of Later Medieval Philosophy* (Cambridge: Cambridge University Press, 1982), 76.

¹¹See C.H. Lohr, 'Medieval Latin Aristotle Commentaries,' *Traditio*, vols. 23–30 (1967–1974); *Latin Aristotle Commentaries: Renaissance Authors* (Florence: Olschki, 1988).

¹²D.N. Hasse, *Avicenna's De Anima in the Latin West* (London: The Warburg Institute, 2000).

¹³See Dod 1982, 79.

works of Aristotle were mostly medieval translations, the trend was to publish new translations in humanist Latin as well as original Greek texts.¹⁴ Because of the university curriculum, Latin translations of Aristotle's books were printed in large numbers, but Ficino's translations of Plato (1484) and Plotinus (1492) as well as many late ancient neoplatonic works were also available. There were numerous publications of works by Cicero, Seneca, and Augustine, and many post-Hellenistic ancient philosophy treatises were translated and published, such as those by Diogenes Laertius, Epictetus, Marcus Aurelius, Plutarch, and Sextus Empiricus. New printed translations of ancient works on Aristotle's *De anima* include the paraphrase by Themistius and the commentaries by Simplicius and Philoponus. In addition, translations of Alexander of Aphrodisias commentary on Aristotle's *De sensu*, Alexander's own *De anima*, Michael of Ephesus' commentaries on *Parva naturalia* and Priscian's treatise on Theophrastus' *De sensu* were published. Printed medieval commentaries on *De anima* or *Parva naturalia* (or their abbreviations) included works by Averroes, Albert the Great, Thomas Aquinas, Peter of Auvergne, John of Jandun, John Buridan, Nicole Oresme, Cajetan of Thiene and many others. Apart from commentaries and numerous theological treatises with psychological parts by Aquinas, Scotus, Ockham and others, printed medieval psychological treatises included such works as Avicenna's *De anima*, Albert the Great's *De homine*, Pseudo-Albert's *Summa naturalium*, Peter of Ailly's *De anima*, Paul of Venice's *Summa philosophiae naturalis*, several medieval medical books, as well as Pietro d'Abano's *Conciliator differentiarum philosophorum et precipue medicorum* and Michel Scot's popular *Liber physiognomiae*.

There were numerous new commentaries or questions on *De anima* and *Parva naturalia* in early modern times. Among the most influential were the works of Agostino Nifo and later those contained in the Jesuit Coimbra commentaries. Other much used works related to psychology in the university curriculum were the questions on *De anima* by Francisco de Toledo (Toletus) and Francisco Suárez, published posthumously in 1621, as well as Philipp Melanchthon's *De anima*.¹⁵

The doctrine of the immortality of the human soul was discussed by many Renaissance authors because it was declared a dogma at the Fifth Lateran Council (1513). The philosophical controversy included positions from Marsilio Ficino's defence of immortality in his *Theologia platonica* (1474) to Pietro Pomponazzi's thesis (1516) that our soul is mortal from an Aristotelian and Averroist viewpoint.¹⁶ This

¹⁴P.B. Copenhaver, 'Translation, Terminology and Style in Philosophical Discourse', C.B. Schmitt et al. (eds.), *The Cambridge History of Renaissance Philosophy* (Cambridge: Cambridge University Press, 1988), 77–110.

¹⁵S. Salatowsky, *De anima. Die Rezeption der aristotelischen Psychologie im 16. and 17. Jahrhundert*, Bochumer Studien zur Philosophie 43 (Amsterdam: B.R. Grüner, 2006).

¹⁶For the discussion of the disciplinary status of psychology in this context, see P.J.J. Bakker, 'Natural Philosophy, Metaphysics, or Something in Between? Agostino Nifo, Pietro Pomponazzi, and Marcantonio Genua on the Nature and Place of the Science of the Soul', in P.J.J. Bakker and J.M.M.H. Thijssen (eds.), *Mind, Cognition and Representation: The Tradition of Commentaries on Aristotle's De anima*, Ashgate Studies in Medieval Philosophy (Aldershot: Ashgate, 2007), 151–177.

was a central issue of the second scholasticism movement, which continued to teach Aristotelian psychology in seventeenth-century Catholic and Protestant universities. Traditional descriptions of the intentional content of cognitions, emotions and other functions of the mind were also used in the attempts to shed light on these phenomena from the new perspective of mechanical physics and natural philosophy by Descartes, Malebranche, Hobbes, Spinoza, and Leibniz. Telesio's late sixteenth-century materialist panpsychism had some influence on Gassendi and other adherents of the new science; Gassendi himself was the foremost proponent of neo-Epicurean atomist physics. Paracelsus's occultist psychology was influential in other circles, as was the Renaissance physiognomic literature. Neo-Stoicism was a further Renaissance movement which continued into the seventeenth century.¹⁷

Early modern conception of the science of the mind was embedded in the European tradition of natural philosophy which formed an intellectual environment since the thirteenth century. In the general move from natural philosophy to science, psychology was increasingly associated with empirical and observational approaches and separated from philosophical and metaphysical concerns in the eighteenth century.¹⁸

The translations which are included in chapters are by the authors, except that some Arabic texts have been translated by Jari Kaukua (JK) and some early modern translations are quoted for historical reasons. Full references are included in the list of primary and secondary sources. We would like to thank Professors Joel Biard, David Charles, Sten Ebbesen and Eyjolfur Emilsson, who kindly commented on an early version of this work, as well as many visitors to the 'History of Mind' centre for useful discussions about the sources of the history of philosophy of mind. The co-editor of this volume, Juha Sihvola, sadly died from a serious illness in June 2012.

¹⁷S. Heinämaa and M. Reuter (eds.), *Psychology and Philosophy: Inquiries into the Soul from Late Scholasticism to Contemporary Thought*, Studies in the History of Philosophy of Mind 8 (Dordrecht: Springer, 2009); C. Leijenhorst, *The Mechanisation of Aristotelianism: The Late Aristotelian Setting of Thomas Hobbes' Natural Philosophy* (Leiden: Brill, 2002); M. Porter, *Windows of the soul: The art of physiognomy in European culture 1470–1780* (Oxford: Clarendon Press, 2005).

¹⁸G. Hatfield, 'Remaking the Science of Mind: Psychology as a Natural Science', in C. Fox, R. Porter, and R. Wokler (eds.), *Inventing Human Science: Eighteenth-Century Domains* (Berkeley, CA: University of California Press, 1995), 184–231, G. Hatfield, 'The Cognitive Faculties', in D. Garber and M.R. Ayers (eds.), *The Cambridge History of Seventeenth Century Philosophy* (Cambridge: Cambridge University Press, 1998), 953–1022, F. Vidal, *The Sciences of the Soul: The Early Modern Origins of Psychology*, trans. S. Brown (Chicago, IL: University of Chicago Press, 2010).

Part I
The Soul as an Entity

Chapter 2

Ancient Theories

Henrik Lagerlund and Juha Sihvola

The ancient Greek and Roman philosophers developed the ingredients of most of the conceptions about the soul which have later become influential in the history of philosophy. Plato's contributions to psychology include highly influential arguments for dualism, whereas Aristotle emphasises a functionalist idea of the soul as the form of a living body. However, both philosophers are far from unambiguous in their theories of the soul, and their importance is by no means reducible to these basic ideas.

Plato is famous for his arguments for the soul's simplicity, non-changeability, immateriality, and divinity in the *Phaedo*. These characteristics of the human soul run through the whole history of philosophy, and even today it is these properties which often come to mind when the soul is talked about. However, Plato himself seems to have changed his mind about the nature of the soul, or he came to realise that the view presented in the *Phaedo* was not the whole story. This can be seen, for example, when Plato discusses issues of health and disease. In these contexts he does not always follow strict dualism; rather, a different, much more monistic conception of the soul seems to emerge. In *Republic IV*, Plato establishes another equally influential conception of the soul, based on its division into three parts or aspects. What was the whole soul in the *Phaedo* is now regarded as the reasoning part in a tripartite structure which also includes emotions and appetites as faculties of the lower parts of the soul. The *Phaedrus* and the *Timaeus* introduce further modifications to Plato's psychology (1).

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As with Plato, with Aristotle there is no real scholarly consensus on the essential nature of his theory of the soul. There is discussion on whether Aristotle's psychology should be understood in terms of dualism, materialism, functionalism or any other position currently recognised in the philosophy of mind. The problems do not only follow from differences between ancient and modern terminology and categories: Aristotle seems also to operate with different conceptions of the soul in different contexts. His standard view of the body-soul relationship is often called 'hylomorphism'. The soul is understood as the form of a living material body, its organization for actualizing a set of functional capacities related to nutrition, perception, and thinking. However, in his discussion of the theoretical intellect, there are at least traces of a conception in which the soul and the body are seen as two distinct entities and the soul is not fully reduced to the psychophysical unity of the living body. There are also passages in Aristotle in which the soul is assumed to be located somewhere in the body (2).

Among the Hellenistic philosophers, there existed a remarkable consensus about some features on the nature of the soul, even though their other philosophical views were quite divergent. The Epicureans, the Stoics, and many Hellenistic physicians endorsed dualist theories of the soul in the sense that the soul and the body are distinct from each other as substances. Despite this distinction, many Hellenistic philosophers also held that souls are material or corporeal. They share the belief that something can be said to exist only if it is spatially extended, three-dimensional, and capable of acting or being acted upon. Therefore, the idea of a purely immaterial soul is rejected. Souls have matter which is, however, different from the matter of inanimate, or 'non-souled', bodies (3). For Epicurus, the soul is a corporeal and material body but constituted by matter which is different from the rest of the body, i.e., the bones, the muscles and the blood. The soul has to be corporeal since only then can it interact with the rest of the body and be co-affected with it. The Epicureans located the functions of thinking and emotions in the mind, which they located in the chest (or heart), whereas the other functions of the soul extend throughout the body.

The sources of the Stoic position on the human soul is much less clear, but Tertullian (160–220) and Calcidius (fourth century) both testify that Zeno (333–264 BCE) and Chrysippus (279–206 BCE) argued that the soul was *pneuma* (in Latin *spiritus*) or breath, and that this is a kind of body. It is of interest that both Epicurus and the Stoics likened the soul with breath. It is this breath that accounts for all the powers of the soul, that is, nutrition, growth, locomotion, sensations, and will.

The later part of the ancient philosophical tradition saw a renewed interest in Plato and Aristotle. The first major commentator of Aristotle, Alexander of Aphrodisias (third century), developed the Aristotelian position in great detail. The most important development was the interpretation he gave to *De anima* III.5, and the introduction of the so-called agent intellect. The influential discussion of this doctrine is in a small treatise on the intellect which was translated into Latin and known in the Arabic philosophical tradition.

The Platonic doctrines became more and more influential towards the end of the ancient tradition. Plotinus (204/5–270) and the Neo-Platonists foremost

incorporated the view which Plato explicated in the *Phaedo*. Plotinus in turn had a significant influence on the first major Christian philosopher, Augustine (354–430). In *De trinitate*, Augustine developed arguments for the incorporeality of the soul, which in turn had an enormous influence on philosophy of mind in a Platonic tradition throughout the Middle Ages and into early modern times. The immediate self-knowledge which he stresses became a characteristic of the soul in this context (4).

1 Platos's Dualism

a. Then what do we say about the soul? Can it be seen or not?

- It cannot be seen.
- So it is invisible ...
- Have we not said some time ago that when the soul makes use of the body for an inquiry, be it through hearing or seeing or some other sense – for to inquire through the body is to do it through the senses – it is dragged by the body to the things which are never the same, and it wanders about and is confused and dizzy, as if it were drunk, because it is in contact with such things? ...
- But when the soul inquires by itself, it passes into the realm of what is pure, everlasting, immortal and unchanging, and being akin to these, it always stays with them whenever it is by itself and not hindered; it ceases to wander about and remains in the same state since it is in touch with such things, and this state is called wisdom ...
- [W]hen the soul and the body are joined together, nature directs the one to serve and to be ruled, and the other to rule and be master. Now, which do you think is like the divine and which like the mortal? Do you not think that the nature of the divine is to rule and to lead and that of the mortal to be ruled and serve?
- I do.
- Which does the soul resemble?
- Clearly, Socrates, the soul is like the divine and the body like the mortal.
- Consider then, Cebes, whether this is a conclusion from all that has been said: the soul is most like the divine, immortal, intelligible, uniform, indissoluble, always the same as itself, whereas the body is most like the human, mortal, multiform, unintelligible, soluble and never the same. (Plato, *Phaedo* 79b–80b)

b. [Y]ou ought not to attempt to cure the eyes without the head, or the head without the body; so neither the body without the soul. And this, he [the Thracian king Zalmoxis] said, is the reason why most diseases evaded the physicians of Greece, that they disregarded the whole, which ought to be particularly studied, for if this is not well, it is not possible that the parts are well. For all good and evil, whether in the body or the entire human being, originates, as he said, in the soul and flows from there, as if from the head, to the eyes. And therefore you must treat it first and foremost if the head and body are to be well. (Plato, *Charmides* 156d–157a)

c. In fact I once heard from wise men that we are now dead and the body is our tomb, and the part of the soul in which the desires are is liable to persuasion and vacillates to and fro. So a smart man, who might have been from Sicily or Italy, played with words and called this part a jar because it was so gullible and easily persuaded. (Plato, *Gorgias* 493a)

d. But a city seemed to be just when each of the three classes of natures within it did its own work, and it was thought to be moderate, courageous, and wise ... Then, if a single man has these same forms in his soul, we will expect him to be correctly called by the same names as the city because of these same conditions in them ...

– Well, then, I said, we are surely compelled to agree that we have within us the same forms and characteristics as the city. They could not get there from any other place. It would be ridiculous to think that spiritedness did not come into the cities from such individuals who are held to possess it, such as the Thracians, Scythians, and others who live to the north, and the same holds of the love of learning, which is mostly associated with our part of the world, or of the love of money, which one might say is conspicuously found among the Phoenicians and Egyptians ...

– Do we do these things with the same part of ourselves, or do we do them with three different parts? Do we learn with one part, get angry with another, and with some third part desire the pleasures of food, drink, sex, and the others which are akin to them? ...

– It is obvious that the same thing cannot at the same time do or undergo opposites with respect to the same part and in relation to the same thing. So, if we ever find these in them, we know that they are not the same but many. (Plato, *Republic* IV, 435b–436c)

e. Enough has been said about the immortality of the soul, but this is what we have to say about its form. To tell what it really is would require an utterly divine and lengthy discourse, but to say what it is like is humanly possible and more modest. Let us now do this. We will liken the soul to the composite power of a pair of winged horses and their charioteer. The gods have both horses and charioteers which are themselves both good and of good descent, whereas those of others are mixed. With the human beings, the driver is in control of a pair of horses. Of the horses, one is beautiful and good and of similar breed, while the other is the opposite by both descent and nature. This necessarily means that, in our case, driving is difficult and troublesome. (Plato, *Phaedrus* 246a–b)

f. As we said at the beginning, all things were in disorder when God made all things proportionate to themselves and others, as far as it was possible to make them to be in harmony and proportion. At this time, they did not participate to any proportionality, except by chance, nor did they correspond to the names we now use of them, such as fire, water, and other such things. He first put all of these into order and then, out of them, put together this universe, which is a single living thing, including all things both mortal and immortal. The demiurge himself constructed the divine ones among them, but ordered his descendants to be the constructors of the mortal ones. They imitated him, and having received the

immortal principle of the soul, around which they fashioned a mortal body. They made the whole body a vehicle and constructed within the body another kind of soul which was mortal and contained within it terrible and necessary passions ... In this way, as was necessary, they framed the mortal soul. (*Timaeus* 69b–d)

Plato's dualism is most emphasised in the *Phaedo*, in which he argues that the soul is a simple unified entity which is unchangeable, immaterial, divine, and immortal (**a**). There is a contrast between the strict dualism of the *Phaedo*, the *Republic*, the *Phaedrus*, and the *Timaeus*, on the one hand, and the somewhat more monistic assumptions in the *Charmides* (**b**) and the *Gorgias* (**c**), on the other (see Robinson 2000). In Greek culture of the fourth century BCE, the idea of immortality of the soul was not commonly accepted, as is emphasised by Socrates' opponents (see, e.g., *Phaedo* 70a, 77b), but the arguments designed by Socrates in the dialogue became extremely influential in the later history of philosophy (see Bostock 1986; Lorenz 2008). The activities directly ascribed to the soul in the *Phaedo* are restricted to the cognitive and intellectual features, whereas the emotions and the appetites are interpreted as functions of the ensouled body. The soul is expected to function in an appropriate way if it is to regulate and control the body with its affections and desires. In the *Republic*, Plato introduces appetite and spirit as the two lower parts of the soul (**d**). These parts, however, are presented as mortal, unlike the reasoning part; in the *Phaedrus*, by contrast (**e**), even the two lower parts are assumed to be immortal. In the *Timaeus* (**f**), which is the latest of the dialogues quoted here, Plato returns to the conception according to which the appetitive and passionate parts of the soul are mortal. See also p. 466.

2 Aristotle's Theory of the Soul as a Form

a. We call one type of being a substance, either as matter (which in itself is not a 'this'), or as shape or form (in virtue of which a thing is called a 'this'), or thirdly as that which is compounded of these. Now matter is potentiality and form is actuality. It is actuality in two ways, as in knowledge and as in contemplating.

Bodies are most commonly regarded as substances, especially natural bodies; for they are the principles of other bodies. Of natural bodies some have life and others do not; by life we mean self-nourishment and growth and decay. So every natural body which has life is a substance, and it is a substance as a composite.

Since it is a body of such a kind, for it has life, the soul cannot be a body; for the body does not belong to those which are attributed to a substrate, but rather is a substrate and matter. Hence the soul must be a substance as the form of a natural body which potentially has life. But substance is actuality, and thus soul is the actuality of a body of this kind.

But ‘actuality’ is used in two ways: as that of knowledge, and as that of contemplating. It is obvious that the soul is an actuality in the same way that knowledge is; for both sleeping and waking presuppose the existence of the soul, and waking is analogous to contemplating, and sleeping to knowledge, possessed but not employed. In a subject, knowledge is temporally prior in the order of origin. Hence the soul is the first actuality of a natural body which potentially has life. The body so described has organs. Even the parts of plants are organs, although very simple; for example, the leaf shelters the pod and the pod shelters the fruit, while the roots are analogous to the mouth, both serving for taking in food. If, then, we have to speak of something common to all kinds of soul, it is the first actuality of a natural body which has organs. (Aristotle, *De anima* II.1, 412a6–b6)

b. Therefore, there is no more need to ask whether the body and the soul are one than whether the wax and the impression in it are one or, in general, whether the matter of each thing and that of which it is the matter are one ... The soul is an actuality in the same way that the faculty of seeing and the capacity of a tool are actualities. The body, on the contrary, is potentially a being. Just as the pupil and the capacity of seeing make up an eye, in the same way the soul and the body make up an animal. It is clear that neither the soul nor certain parts of it, if it has parts, are separable from the body, for in some cases the actuality is the actuality of parts themselves. However, nothing prevents that some parts are separable since they are not actualities of any parts of the body. It also remains unclear whether the soul is the actuality of the body in the same way as the sailor is the actuality of the ship. (Aristotle, *De anima* II.1, 412b6–9, 413a1–9)

c. Concerning the intellect and the faculty of contemplation nothing is so far clear, but it seems to be another kind of soul, and it is only this that is separable, just as the eternal is separable from the perishable. (Aristotle, *De anima* II.2, 413b24–27)

d. And there is an intellect which is such by becoming all things, while there is another which is what it is by producing all things as a kind of disposition, like light, for light makes potential colours into actual colours. This intellect is separable, impassible, and unmixed, as it is essentially activity. (Aristotle, *De anima* III.5, 430a14–18)

e. It is clear that one has to regard the affection which is generated through perception in the soul, that is, the part of the body which has it, as a kind of image and the state of having this as memory. (Aristotle, *De memoria* 1, 450a27–28)

f. The only part which animals must have is something that is analogous to the heart, since the sensitive soul and the source of life in all animals belong to something which rules the body and its parts. (Aristotle, *De partibus animalium* IV.5, 678b1–4)

Aristotle usually interprets the soul as the form of a living material body, organised to actualize a set of functional capacities related to all aspects of its living, nutrition, perception, and thinking (**a**). He does not, however, quite consistently follow the hylomorphism in his accounts of the soul's activities. There are a few occasions in which Aristotle emphasises the separability and immateriality of the intellect (besides **b**, **c**, and **d**, see, e.g., *De anima* III.5, 430a23–26; *De generatione animalium* II.3, 736b26–28). The remarks about the immortality and eternity of the separable reason may, according to some commentators, indicate the immortality of individual human souls, but in fact, there is very little in our sources to support this interpretation. Aristotle also seems to assume on some occasions (**e**, **f**) that the soul is a distinct entity and has a specific location, i.e., the heart. He distinguishes affections which are common to the soul and the body from those which are peculiar to the soul (*De somno* 1, 453b12; *De anima* III.10, 433b19–21; *De sensu* 1, 436a8), and mentions impulses which arrive at the soul or reach the soul (*De anima* I.4, 408b16–18; *De divinatione per somnum* 2, 464a10–11). See Shields 2011.

3 Non-dualist Theories

a. Next, we must see, referring to the perceptions and affections (for these will provide the surest conviction), that the soul is a body composed of fine parts which are diffused all over the aggregate and most closely resemble breath blended with heat, in one way like breath and in another like heat. There is also a part which is much finer than these and because of this is more liable to co-affect with the rest of the aggregate. This is shown by the abilities of the soul: its feelings, its ease of motion, its thought processes, and the things the loss of which lead to death.

Further, we must keep in mind that the soul is most responsible for causing sensation. But it would not be thus if it were not somehow confined within the rest of the aggregate. But the rest of the aggregate, though it provides for the soul this causality, itself has a share in this property because of the soul; still it does not have all the features of the soul. Hence on the departure of the soul it loses sense-perception. For it had not this power all in itself, but something else which came into being with it provided it; and this, through the power brought about in itself by its motion, immediately achieved for itself a property of sentience and then gave it to the other, because of their proximity and mutual harmony, as I said ... Furthermore, when the whole aggregate is destroyed, the soul is dispersed and no longer has the same powers, nor its motions; hence, it does not then have sensations, either. (Epicurus, *Letter to Herodotus*, in Diogenes Laertius, *Lives of Philosophers* X.63–65)

b. He [Cleanthes] also says that neither incorporeal is co-affected with a body nor a body with anything incorporeal but only a body with another body. The soul is co-affected with the body when it is sick and being cut, and so the body with the soul. Thus when the soul is ashamed, the body becomes red, and when the soul is scared, the body turns pale. So the soul is a body. (Nemesius, *De natura hominis* 2 (78.7–79.2)=SVF 1.518=LS 45C)

c. Chrysippus says that death is the separation of the soul from the body. But nothing incorporeal ever separates from the body, for what is incorporeal does not touch the body. The soul, however, does touch the body and is separated from it. Therefore the soul is a body. (Nemesius, *De natura hominis* 2 (81.6–10)=SVF 2.790=LS 45D)

d. They [the Peripatetics and the Stoics] first state the assumption that the heart is generated first of all. Second, they also believe that the heart generates the other parts as if the constructor of the heart, whoever it is, had ceased to exist. Finally, it follows, they claim, that even the deliberative part of our souls is situated there. (Galen, *De foetuum formatione*, Kühn 4, 698=LS 53D)

e. [Diogenes says the following...] Articulate utterances flow from the same source as plain voice, and, therefore, meaningful articulate utterance also flows from there. This is language. Therefore language flows from the same source as plain voice. Plain voice does not have its origins in the head region, but in a lower area, for it is obvious that it comes from the windpipe. Therefore neither does language have its origins in the head region but in a lower area. But it is also true that language is generated from thought, for some people in fact define language as meaningful utterance that comes from thought. It is also plausible that language flows imprinted or as if stamped by means of conceptions in thought, and it is temporally simultaneous with thinking as well as the activity of speaking. Therefore, neither is thought located in the head but in a lower region, most likely somewhere around the heart. (Galen, *On the Doctrines of Hippocrates and Plato* 2.5.9–13)

f. Then Zeno, defining the soul as the connatural spirit, teaches as follows: that which causes the death of an animal when it departs is a body. But when the connatural spirit departs, the animal dies. But the connatural spirit is a body. Therefore, the soul is a body. (Tertullian, *De anima* 5.3 (SVF 1.137))

g. Chrysippus says that it is certain that we breathe and live by one and the same thing. And we breathe by the natural spirit. Therefore we live as well by that very spirit. And we live by the soul. Therefore the soul is found to be natural spirit ... The parts of the soul flow from their seat in the heart, as though from the source of a spring, and spread through the whole body, continually filling all the limbs with vital spirit, and ruling and controlling them with countless different powers, such as nutrition, growth, locomotion, sensation, the impulse to action. The soul as a whole extends the senses, which are its functions, from the ruling faculty, like branches

from a tree, to report what they sense, while it itself like a king passes judgment on their reports. (Calcidius 220 (SVF 2.879, part; LS 53G))

h. Intellect, according to Aristotle, is threefold. One is material intellect; by ‘material’ I do not mean that it is a substrate like matter ... but since what it is for matter to be matter is in its power to become all things, then that is material in which this power and potentiality is, insofar as it is potential ... Another is the intellect which is already thinking and has a competence for thinking and is capable of acquiring by its capacity the forms of the objects of thought. It is analogous to those who have the competence for building and are capable by themselves of doing things in accordance with their art ... The third intellect, in addition to the two already described, is the productive intellect through which the material intellect receives its competence, and this agent intellect is analogous, as Aristotle says, to light. For as light is the cause which makes potentially visible colours actually visible, so also this third intellect makes the potential and material intellect an actual intellect by instilling a thinking competence in it ... The productive intellect is also said to come ‘from outside’, and it is not a part or capacity of our soul, but comes to be in us from outside when we grasp it. (Alexander of Aphrodisias, *De intellectu* (106.19–108.13))

In Hellenistic philosophy, both the Epicureans and the Stoics held that there is some grounds for distinguishing soul from the body, but only in the sense that the soul is a body which consists of a particular kind of matter (von Staden 2000). The Stoics argued for the corporeality of soul saying that the soul is a body because only bodies have a capacity to affect and be affected by one another (**b**), and souls and bodies affect one another in occasions of physical pains and emotions (on this argument, see, e.g., Annas 1992a). Epicurus also used the same line of argument (**a**). The Epicureans and the Stoics were also in agreement in their views that the soul is a particularly fine piece of body, the so-called *pneuma* (Lat. *spiritus*), a hot breath which is diffused throughout the living organism (**f**, **g**). The Epicureans held that the soul is mortal and dissolves at death (**a**), whereas the Stoic view was that even though the soul survives death it is mortal in the end (**c**). As physicians such as Herophilus performed human dissection and possibly also vivisection in Hellenistic Alexandria, new empirical knowledge made it possible to locate the soul in the brain, but the Stoics still subscribed to the heart-centered theory of the soul’s location (**d**, **e**). See Tieleman 1996.

The short comment by Aristotle in *De anima* III.5 alluding to a distinction between the material and the productive part of the intellective soul seems innocent, but has generated intense commentary throughout the history of philosophy beginning with Alexander of Aphrodisias. He draws (**h**) a three-fold distinction, but the first two are usually taken to be the same intellect only taken differently, that is, in one way in potency and in another in act. The active productive intellect is not in the human soul but belongs to the prime mover; cf. Alexander of Aphrodisias, *De anima* 88.14- 90,19. For discussions of the authenticity of the *De intellectu* and Alexander of Aphrodisias' view of the intellect, see Sharples 2008. In late medieval thought Alexander was regarded as a proponent of the view that the human intellectual soul is mortal. See pp. 30–31.

4 Late Ancient Views

a. If this [the soul] were extended, and the perceptions were, as it were, projected onto both extremes of a line, it will be the case that either they will come back together again at a single point, such as the middle, or each of them will have a perception of its own, just as if I perceived something and you something else. And if there is a single thing perceived, such as a face, either of the following will be the case. It will be contracted in a single point, as it appears to happen, for it is gathered together in the pupils of the eyes, for how could we otherwise see large objects through them? Furthermore, in this case what reaches the ruling faculty will be like objects of thoughts and without parts, and the ruling faculty is itself without parts. Or alternatively, if it [the thing perceived] were a magnitude, what perceives would be divisible in the same way, so that each of its parts would apprehend a different part, and nothing in us would have an apprehension of it as a whole. (Plotinus, *Enneads* IV.7.6.15–26)

b. And, if one ought to have courage to state one's view more clearly, even if it contradicts the opinion of others, even our soul does not completely come down, but something of it will always remain in the intelligible. If the part which is in the perceptible gains control, or even more if it is controlled or thrown into confusion, we shall not be able to perceive those objects which the upper part of the soul contemplates. The intelligible arrives within our reach, when it comes down to be perceived in its descent. We recognise, for example, an appetite which remains in our appetitive faculty, but only when we apprehend it either by our internal perceptual or intellectual faculty, or by the both of them. (Plotinus, *Enneads* IV.8.8.1–8)

c. But since we study the nature of the mind, let us remove from our consideration any knowledge which is obtained from without through the senses of the body, and pay more attention to the principle which we have laid down: that all minds know

and are certain concerning themselves ... Who would doubt that he lives, remembers, understands, wills, thinks, knows, and judges? For even if he doubts, he lives; if he doubts, he remembers why he doubts; if he doubts, he understands that he doubts; if he doubts, he wishes to be certain; if he doubts, he thinks; if he doubts, he knows that he does not know something; if he doubts, he judges that he ought not to consent rashly ... And those do not realise that the mind knows itself even when it seeks for itself, as we have shown. But it is not at all correct to say that a thing is known while its substance is unknown. Therefore, when the mind knows itself, it knows its own substance, and when it is certain about itself, it is certain about its own substance. But it is certain about itself, but it is not at all certain whether it is air, or fire, or a body, or something of a body. Therefore, it is none of these things ... The mind thinks of fire as it thinks of air or any other bodily thing it thinks of. But it cannot happen that it should think of that which it itself is, in the same way as it thinks of that which it itself is not. For all these, whether fire, or air, or this or that body, or that part or combination or tempering of a body, it thinks of by means of an imaginary fantasy, nor is it said to be all of these, but one or the other of them. But if it were any one of them, it would think of this one in a different manner from the rest. (Augustine, *De trinitate* X.10.14–16)

Plotinus returns to the strong dualism found in Plato's *Phaedo*. He argues against the Stoics that the soul, as distinct from the bodies, is not extended and immaterial. This is taken to be clear from the unity of the subject of perception **(a)**. The subject of perception is not the highest part of the person; it is the intellect through which persons can engage in non-discursive thinking and which does not descend into the body, remaining eternally in higher spheres **(b)**. Later Neoplatonists tended to reject the idea of an undescended part of the soul. See Sorabji 2005, 93–99. Augustine was influenced by Plotinus and argues by way of two related arguments for the incorporeality of the soul. One argument takes its starting point in the soul's immediate knowledge of itself while the other one argues that if the mind had any particular corporeal nature, it should think of that nature without a representation **(c)**. See Matthews 2003 and Lagerlund 2008.

Chapter 3

Medieval and Early Modern Theories

Henrik Lagerlund

Late ancient attempts to combine Aristotelian and Neoplatonic ideas of the mind continued among Arabic philosophers who were acquainted with ancient philosophy through numerous translations, including parts of Plotinus' *Enneads* under the title *The Theology of Aristotle*. Through the twelfth-century translation of the sixth book of Avicenna's *Kitāb al-Shifā* (The Book of Healing), Avicenna's conception of the soul influenced twelfth- and early thirteenth-century Latin philosophy of mind, the second main source being Augustine. Both Augustine's and Avicenna's views of the soul belong to the Platonic tradition, and hence emphasise the independence of the soul from the body and its self-knowledge. Through a thought-experiment known as 'the flying man', Avicenna asks what knowledge humans without any sense experience would have. The answer is that they would know that they exist. Treating the soul as an immaterial substance, Avicenna explained that the Aristotelian formula of the soul as a form of the body is an expression of its function rather than its essence. Augustinian thinkers stressed the unity of a spiritual and immaterial soul as the centre of mental activities.

In the first part of the thirteenth century, Aristotle began to be the dominant influence on Western philosophy. This came about in large part because of the new Latin translations of Averroes's commentaries of Aristotle's works. Averroes's commentary on Aristotle's *De anima* was a widely used exegetical tool when Latin authors began to compose their own commentaries in the 1240s. The reception of Aristotle did not change the prevalent view of the soul as a spiritual substance during the first half of the thirteenth century. Aristotle's ideas of hylomorphism were interpreted from the point of view of an eclectic dualist theory: the incorporeal soul substance was taken to act as an animating principle of the body (1).

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While Averroes followed Aristotle's idea of the soul as a form of the sensory soul and its faculties, he treated the active and passive intellect as separate substances. Avicenna also regarded the active intellect as a higher sphere which activates the universal concepts in human minds, but as distinct from Averroes, he thought that the passive intellect, which is actualized by the active one, is the highest part of individual minds. According to Averroes, the passive intellect is a separate immaterial sphere which is somehow informed by the intelligible contents in human sensory souls. While this view did not find many adherents, it created much discussion because it denied the individual human intellect and the immortality of particular souls. Thomas Aquinas criticised Averroes's monopsychism and also the traditional eclecticism which regarded the soul as a substance and a form. He thought that the rational soul should be understood as form, but in fact he also provided it with functions similar to those of spiritual substances (2).

Some mid-thirteenth century authors, who were more sympathetic to the metaphysical views of Augustine than Aristotle, argued that all created entities are compositional, and therefore the immaterial rational soul is composed of a substantial form and spiritual matter. Peter John Olivi held that this soul cannot be a form of the body. Robert Kilwardby characterised the soul as a form in some sense, but certainly not in the sense intended by Aristotle. While Thomas Aquinas argued for a unity of the soul in human beings, there were others who defended the plurality of substantial forms under the highest rational form (3).

Medieval discussions of the nature of the soul took a new turn with John Buridan. In his *De anima* commentary, Buridan puts down three positions which were often mentioned and discussed after him. The first of these is Averroes's view, and the second is attributed to Alexander of Aphrodisias. It is a position holding the soul of humans to be extended and to perish with the body. This was found to be a very controversial position since it denied personal immortality. The third position is the one Buridan himself defends and which he calls the position of faith. According to this view, the soul of a human is a substantial form which inheres in the body and is not extended and not naturally corruptible. This position resembles that of Aquinas, who thought that it could be philosophically proved. The same three positions outlined by Buridan are also mentioned by Pietro Pomponazzi in the early sixteenth century. He famously defends the position Buridan attributes to Alexander as philosophically sound. The soul is essentially material and mortal and immaterial and immortal in a relative sense, which means that it possesses powers through which it can be in contact with the superior immaterial spheres. Buridan's influence is hence traceable all the way up to the sixteenth century. Pomponazzi's view became widely discussed because it was taken to be in tension with a decree of the Fifth Lateran Council (1513) which made the immortality of the soul a dogma of the Church and commanded university professors of philosophy to refute arguments challenging Christian truths (4).

Bernardino Telesio studied in Padua a few years after the so-called 'Pomponazzi affair' (the broad-scale controversy aroused by Pomponazzi's treatise on the immortality of the soul). Telesio ended up leaving the university, however, and hence did not have to live by the decision of the Lateran council pertaining to university

teachers. Telesio was free to develop a materialist conception of the soul. According to him, the soul is a part of the body. He calls this part a spirit. A similar view was defended by Thomas Hobbes, except that he reduced all mental phenomena to mechanist corporeal movements (5).

The materialism of Telesio and Hobbes is in stark contrast with the view which is found in René Descartes's *Second Meditation*. In the Preface to the *Meditations*, Descartes claims that he has lived up to the demands of the Catholic Church mentioned above. Descartes tries to prove that he is a thinking substance, a mind or an intellect, which can be aware of sense-perception taking place through the body. There are similarities between Descartes and earlier representatives of Augustinian and Neoplatonic traditions, such as Avicenna and Olivi. The mind or soul is a thinking thing, on this view, and the body is an extended thing. The distinction between two incompatible substances expresses the famous mind-body dualism. The same view is also expressed by Nicolas Malebranche. Henry More, one of the Cambridge Platonists, included some Cartesian ideas in his Neoplatonist Worldview.

After Descartes, mind-body dualism, although already present in ancient thought, became a dominant problem of philosophy of mind – a position it has held ever since. One of the influential solutions to it was presented by Baruch Spinoza. According to Spinoza, the mind and the body are one and the same thing viewed under different attributes. This is often referred to as Spinoza's parallelism. Another solution was defended by Gottfried Wilhelm Leibniz. Everything, on Leibniz's view, are souls (or 'monads', as he calls them). These monads are simple immaterial substances. He is also a stern critic of materialism, one source of which was the revival of ancient atomism (6).

An important aspect of the human soul is its activity. It is the only thing in nature which seems to cause motion without any previous motion. Incorporating this property into a material or corpuscular view of the mind has proved difficult. Both John Locke and George Berkeley, two of the famous British Empiricists, testify to this. The result of the empiricist conception of the soul can be found in the writing of David Hume, who stresses that there is no soul, that is, no unifying principle or simple immaterial substance. According to Hume, what others call soul is just a bundle of perceptions (7).

1 Early Medieval Dualism

a. If a man were suddenly created with his hands and feet stretched out so that he neither saw nor touched them nor they touched himself nor heard any sound, he would not know that any of his bodily parts existed, and yet he would know that he existed and that he is some one thing even though he would not know all those parts, for what is not known is not that which is known. (Avicenna, *De anima* V.7 (ed. van Riet, 162))

b. 'Soul' is not the name of this thing on the basis of its substance, but because it guides the body and is related to it. Therefore the body is included in its definition ...

The soul has been discussed in natural philosophy because studying it as a soul is to study it as related to matter and motion. Therefore a different study is required for knowing the essence of the soul as such. (Avicenna, *Liber de anima* I.1 (ed. van Riet, 26–27))

c. The soul is an intellectual spirit which is rational, always living, always moving, and capable of willing good and evil. In accordance with the benignity of the Creator and its various works, it is called by various names. It is called the soul when it nourishes, the spirit when it contemplates, the sense when it senses, the intellect when it is wise, the mind when it understands, the reason when it discerns, the memory when it remembers, and the will when it consents. But these do not differ in substance, as they do in name, because they are all one soul. The properties are different, but the essence is one. (Anonymous, *Liber de spiritu et anima* 13, PL 40 (788–789))

d. It should be known that some created substances are spirits and not souls, namely, angels; some are souls and not spirits, namely, the sensory soul in animals and the vegetative soul in plants; and some are spirits and souls, namely, the rational soul. This is a spirit because of its rational nature, through which it differs from the bodies and remains separate, like angels; and it is a soul because of its ability to be united with a body through which it animates and vivifies the body. (John of la Rochelle, *Summa de anima* 2.2 (52))

e. I reply that they [soul and body] are not parts of the same, and that they are not in any way bound to each other since a connection of this kind provides the body with existence and preserves it, but not the soul. For these are like that which gives life and that which receives it, like that which sheds light and that which is lightened; like that which acts and that which is acted on, or like that which flows and that which receives the flow. (William of Auvergne, *De anima* (152))

Many Latin writers made use of Avicenna's dualist conception of the rational soul and its immediate self-awareness before the rise of Aristotelianism in the thirteenth century (**a**). See Hasse 2000; for a more extensive version of this argument, see pp. 431–432 below, with a translation from the Arabic text. Avicenna thought that the Aristotelian view of the soul as a form of the body can be understood as referring to one of the tasks of the soul, that is, acting as a form (**b**). Similar views were put forward on the basis of Augustine's works, which played a central role in early medieval theology. Augustinian psychology was summarised in the influential pseudo-Augustinian *Liber de spiritu et anima* from the second half of the twelfth century (**c**). In his *Summa de anima* (c. 1235), John of la Rochelle deals with various concepts of the soul and tries to explain the compatibility of Aristotle's view of the soul as 'the first act of a physical body capable of life' (*De anima* II.2, 414a12–14) with the Platonist view of the soul as an incorporeal substance by arguing that acting as an animating soul is one of the

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functions of the spiritual substance (**d**); see also *Summa de anima* 2.2 (53). This sort of dualism was the prevalent conception of the soul during the first half of the thirteenth century and was also usual among the first commentators on Aristotle's *De anima*. (See Bazán 1997.) A widely debated question was how the immaterial substance governs the bodily substance. William of Auvergne refers to the popular hierarchical relationship in his *De anima* from the 1230s (**e**). For various attempts to define the rational substance, see Dales 1995.

2 Averroes and Aquinas

a. Therefore it has been explained that the first perfection of the intellect differs from the first perfection of other powers of the soul and that this word 'perfection' is used of these in an equivocal way, contrary to what Alexander thought. Thus Aristotle said, regarding the definition of the soul as the first perfection of a natural organised body, that it was not yet clear whether the body is perfected by all the powers in the same way, or whether there is a power among these by which the body is not perfected. (Averroes, *Long Commentary on De anima* III.5 (320))

b. It was necessary to ascribe these two actions to the soul in us, that is, to receive the intelligible and to make it, even though the agent and the recipient are eternal substances, because these two actions are reduced to our will, that is, to abstract intelligibles and to think them. (Averroes, *Long Commentary on De anima* III.18 (439))

c. Higher still than these [that is, animal souls] are human souls, which are similar to higher substances even in the kind of knowledge, since they are able to know immaterial things through understanding. However, they differ from these through having the nature of acquiring the immaterial cognition from the cognition of material things which takes place through the senses. Therefore the mode of the existence of the human soul can be known from its operation, for insofar as it possesses an operation which transcends material things, its being is elevated above the body and does not depend on it. But insofar as it by nature acquires immaterial knowledge from what is material, it is clear that it cannot achieve the completion of its kind apart from union with a body, for a thing is not complete in its kind unless it has those things which are required for the proper operations of its kind. Therefore, if a human soul insofar as it is united to the body as its form still has being which is elevated above the body and does not depend on it, clearly this soul is constituted on the border between corporeal and separate substances. (Thomas Aquinas, *Quaestio disputata de anima*1)

d. The intellect of different persons is the same, for the substance of the intellect is one and so is its power ... Therefore the intellect is united with us when the imagined intentions which are later caused to be actually understood are united with us, and as these imagined intentions are dispersed in different people, so the intellect is dispersed, even though it is one according to its substance and its power is one ... therefore the speculative intellect is mortal in this human being, while it in itself is eternal without qualification, as Averroes says. (Siger of Brabant, *In tertium De anima* (28.61–29.12))

e. The commentator is of the opinion that the intellect is numerically the same in all humans ... But this position is heretical according to our faith and it seems to be irrational as well. Since the intellect exists as the form of the body, as Aristotle argues with respect the soul in general, it is clear how the intellect becomes numerous and multiple through the bodies of humans. (Siger of Brabant, *Quaestiones super Librum de causis* 27 (111–112))

While Averroes argued for the hylomorphism for the sensory soul (**a**), he treated the active and passive intellect as separate cosmic spheres (**b**). The acts of imagination based on sensory representations provide the material on which the powers of the cosmic intellect function. This is the kernel of Averroes's famous monopsychism. (See Davidson 1992; Ivry 2008b.) Aquinas stresses that the human soul is the form of the body rather than a substance, but he also holds that the intellect's activity as such is independent of the body (**c**). This is relevant for the immortality of the soul because the subsistent form is imperishable (*Summa theologiae* I.75.6). See de Bazán 1997; Pasnau 2002a. Aquinas wrote a separate treatise *Against the Averroists* in which he criticised the monopsychist interpretation of Aristotle (de Libera 1994). One of the few Latin proponents of the monopsychism was Siger of Brabant (**d**), but he later accepted Aquinas's view (**e**). See Bazán 2005.

3 Unity and Plurality of Forms

a. 'Matter' is commonly said to be that which is, and 'form' is said to be that by which it is. According to this, it is said that all things subsisting by themselves, with the exception of God, have something that is and something by which it is, and the former is the subject of the form. (Robert Kilwardby, *De ortu scientiarum* (96.3–6))

b. Since every material being is actual by its form, the human body will be truly intellective and free through the intellective part, if the intellective part is its form, just as it is truly sensory and living through the sensory soul. But it is impossible for the former to be shared with the body because that sort of characteristic can belong

only to simple matter which is spiritual or intellectual and is both unable to be generated and imperishable in respect of such a characteristic. For since the intellectual and free form is the highest and most simple of all forms, the matter which of itself can be associated with it must be in the genus of the highest and most simple matter. The will stands over and on itself with some sort of mastery by which it is carried over onto its very self in order to take hold of itself and move itself freely. But this sort of highly spiritual and exceedingly intimate turning back and turning toward cannot belong to it through corporeal matter while it is in corporeal matter, since this sort of turning back and turning toward cannot exist in corporeal matter. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 51 (II, 104–105))

c. I know many corporeal and spiritual forms which do not have a unity between themselves, and I know also that some have some kind of unity, but not a perfect one. And I know that from a diversity of forms a diversity of actions follows, and that the diversity of objects leads to the knowledge of the diversity of actions, and then there will be knowledge of the diversity of powers and forms. But that there would be a complete unity of the forms which produce actions of a different kind and require objects of a different kind is something I neither know nor understand, but consider it false and impossible. (Robert Kilwardby, *Epistola ad Petrum de Conflato* 7 (49–50))

d. Are the sensory and intellective souls really distinct in a human being? ... It is impossible that contraries exist simultaneously in the same subject; but an act of desiring something and an act of rejecting that same thing are contraries in the same subject; therefore, if they exist simultaneously in reality, they do not exist in the same subject. But it is clear that they exist simultaneously in the same human being, since a human being rejects with the intellective appetite the very same thing which is desired by the sensory appetite. Sensations exist subjectively in the sensory soul, either mediately or immediately; but they do not exist subjectively in the intellective soul; therefore, the two souls are distinct ... A numerically identical form is not both extended and non-extended, or both material and immaterial; but in a human being the sensory soul is extended and material, whereas the intellective soul is not, since it exists as a whole in the whole, and as whole in each part; therefore etc. (William of Ockham, *Quodlibeta septem* II.10 (OTh 9, 132–133))

Some theologians followed the view of the Jewish eleventh-century thinker Solomon ibn Gabirol (Avicebron) who argued in his *Fons vitae* that, with the exception of God, all substances are composed of form and matter, whether spiritual or non-spiritual. In the second part of the thirteenth century, this view was defended by the Dominican Robert Kilwardby (**a**) and the Franciscan Peter John Olivi (**b**). Olivi argued that the human soul is a hylomorphic composite of spiritual matter and an immaterial substantial form. The immaterial form, which makes the human soul into what it is, is such that it cannot inhere in

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extended matter. It can only inhere in spiritual matter. The soul is a composite substance on Olivi's view, and a human being is a union of two complete substances. Another influential theory was the theory of the soul as a plurality of forms. While Aquinas argued that there is one substantial form in a human beings, Kilwardby and many others thought that there are many forms representing the levels of soul and its actions and these are hierarchically ordered under the intellectual form (c). For Kilwardby's views, see Silva 2012. The multiplicity of formal aspects of the human soul is also found in Ockham and in most Franciscan thinkers. Ockham's argument that there must be at least two souls in each human being is a version of Plato's argument from the *Republic* (see above). There must be two souls since there can be conflicting emotions and one simple soul cannot have contrary states in it at the same time (d). Ockham assumes that there are two separate souls in humans, one sensory and another intellective. These souls are substantial forms for Ockham. The sensory soul is a material form extended as a part in a part, while the intellective soul is immaterial and whole in each part. See Lagerlund 2008.

4 From Buridan to Second Scholasticism

a. I say that there have been three famous opinions about the intellect itself. The first opinion was that of Alexander which is quoted by the Commentator. Alexander declared that the human intellect is a generable and corruptible material form, educed from the potentiality of matter and extended with the extension of matter, just like the soul of a cow or the soul of a dog, and it does not remain after death.

Another was the opinion of Averroes that the human intellect is an immaterial form, ungenerated and incorruptible, and thus it is neither educed from the potentiality of matter nor extended. It is not even made many by the multiplicity of human beings; there is one intellect for all humans, that is to say, an intellect by which I think, you think, and so on for everyone else. Therefore, it is not a form inhering in a body.

The third opinion is the truth of our faith, which we should firmly believe, namely, that the human intellect is the substantial form of a body and inheres in the body, but is not educed from the potentiality of matter, nor extended with its extension, and so is not naturally generated nor corruptible. (John Buridan, *Quaestiones in Aristotelis De anima* III.3)

b. Therefore it seems more reasonable that the human soul, since it is the highest and most perfect of material forms, is truly that by virtue of which something is a 'this', being itself truly not a 'this' in any way. Thus it is truly a form which begins and ceases to be with the body and cannot in any way operate or exist without it. It has only one way of being or operating, and for this reason it can be multiplied,

being truly the principle of multiplication in the same species. They are not actually infinite, but only potentially, like other material things, and they possess powers which are organic and simply material, namely sensitive and vegetative [powers]. But since it is the noblest of material things at the boundary of immaterial things, it has the flavour of immateriality, but not in an unqualified way ... Therefore the intellect and the will are not truly immaterial things in us, but relatively and to a slight extent. (Pietro Pomponazzi, *De immortalitate animae* 9)

c. The entire world is occupied by the Aristotelians who are mostly divided into two sects: those who follow Alexander and those who follow Averroes. The former take our intellect to be mortal and the latter contend that it is one. Both equally destroy all religion from the foundation. (Ficino, *Opera* I (872))

d. Because of its nature, our intellect also lacks species and therefore falls short of the perfection of the angelic intellect, but it has a certain similarity to it, for as soon as our intellect knows something through the fantasy, a species representing it flows from the intellect itself. So this agency is more like an emanation of a species from the intellect and therefore this agency is not a distinct power. (Suárez, *De anima* IX.8.18)

In dealing with the immortality of the soul, Buridan distances himself from the followers of Alexander and Averroes, representing the truth of the faith which he, as distinct from Aquinas, does not think to be naturally provable **(a)**. See Zupko 2004, 2007; Lagerlund 2004. The same competitive interpretations of Aristotle are also mentioned by Marsilio Ficino, a famous defender of Platonist dualism **(b)**. Intellect as a substantial form of the body cannot be a self-subsisting entity **(c)**, as well as by Pietro Pomponazzi, who argues for Alexander's mortalist view of the soul as the philosophically most plausible. For Pomponazzi's view, see Casini 2007; Kärkkäinen and Lagerlund 2009. Following the guidelines set by the Fifth Lateran Council, the sixteenth century representatives of the second scholasticism were active in arguing for the immortality of the soul. Francisco Suárez comments on Aquinas's proof in the *Summa theologiae* as follows: 'What is a form alone and subsistent cannot be corrupted *per se*. This is proved as follows: for what belongs *per se* to something cannot be separated from it. But existence belongs *per se* to the form; therefore it is impossible for this to be separated from that; therefore it is impossible for it to be corrupted' (*De anima* II.3.21). In this argument it is first supposed that a subsisting rational form exists. Suárez's approach to the activities of this form tends to be internalist and his conception of the soul-body relationship is more dualist than in Aquinas **(d)**. Many scholars have seen similarities between the dualist trend of the second scholasticism and Descartes's metaphysics. (See South 2012.)

5 Early Modern Materialists

a. If it has been proved that in the spirit derived from the seed is the substance of the soul of other animals, one cannot doubt that it is the same in humans as well, in a more noble form, and it is surely not of a different nature and does not have very different capabilities. We see that humans are constituted by the same things as other animals, and that they have the same capabilities and even the same organs for feeding and reproduction, and that they produce a very similar seed and emit it in the same way and with the same pleasure and into a similar place and become tired after the emission of seed, and that the same things are formed out of it in both cases, namely the same nervous and membranous kind of being. And it is only this [the spirit] which in all beings perceives and moves in the same way and by the same reason. (Bernardino Telesio, *De rerum natura* V.3)

b. [A] thing may enter into account for matter, or body; as living, sensible, rational, hot, cold, moved, quiet; with all which names the word matter, or body, is understood; all such, being names of matter. All other names are but insignificant sounds; and those of two sorts. One when they are new, and yet their meaning not explained by definition; whereof there have been abundance coined by schoolmen, and puzzled philosophers . . . Another, when men make a name of two names, whose significations are contradictory and inconsistent; as this name, an incorporeal body, or (which is all one) an incorporeal substance, and a great number more. For whensoever any affirmation is false, the two names of which it is composed, put together and made one, signify nothing at all. (Thomas Hobbes, *Leviathan* I.4)

Telesio thought, like the Stoics, that the soul is formed by a fine stuff which has psychic powers. It is the same in humans and animals (**a**). There were related ideas of cosmic panpsychism in Campanella, Patrizi and Bruno. For Telesio's view, see Boenke 2009. Hobbes's psychology is based on reductionist mechanical materialism rather than panpsychism. Words like 'living', 'sensible', and 'rational' are all names of matter or body. Everything ultimately reduces to the motion of material parts (**b**). See Leijenhorst 2002.

6 Dualism, Monist Parallelism, and Monadic Pluralism

a. But what now when I suppose that there is a supremely powerful and (if I may say so) malignant being, who deliberately tries to deceive me in any way he can? Can I not assert that I possess at least the minimum of all the things of which I have just spoken, as belonging to the nature of a body? I attend to them, think about them, go over them again, but nothing occurs to me; it is tiresome and pointless to repeat

it again. But what about the things I attributed to the soul? What about nutrition and movement? Since now I do not have a body, these are mere fictions. What about sense-perception? This surely does not take place without a body, and when asleep I have appeared to sense many things which I afterwards observed I did not sense. What about thinking? Now I find it. Thought exists; this alone cannot be separated from me. I am, I exist – that is certain. But how long? As long as I am thinking; for perhaps it could happen that if I were to cease from all thinking, I would wholly cease to be. At present I am not admitting anything unless it is necessarily true. I am hence precisely only a thinking thing; that is, I am a mind, or intelligence, or intellect, or reason – words whose signification has been unknown to me until now. Yet I am a real thing which truly exists. But what kind of a thing? As I have said – a thinking thing. (Descartes, *Meditationes de prima philosophia* II, AT VII, 26–27)

b. The soul, on the contrary, is that in me which thinks, which perceives, which wills – it is the substance in which are found all the modifications of which I have an inner sensation, and which can subsist only in the soul which perceives them. (Nicolas Malebranche, *De la recherche de la vérité* I.10)

c. I conceive the entire Idea of a Spirit in generall, or at least of all finite, created and subordinate Spirits, to consist of these severall powers or properties viz. Self-penetration, Self-motion, Self-contraction and Dilatation, and Indivisibility; and these are those I reckon more absolute: I will adde also what has relation to another, and that is power of Penetrating, Moving, and Altering the Matter. These Properties and Powers put together make up the Notion and Idea of a Spirit whereby it is plainly distinguished from a Body, whose parts cannot penetrate one another, is not Self-movable, nor can contract nor dilate itself... (Henry More, *Antidote against Atheism* I.4)

d. [T]he idea of the body and the body, that is, mind and body, are one and the same individual thing which at one time is conceived under the attribute of thought and at another under the attribute of extension. Hence the idea of the mind and the mind itself are one and the same thing, which is conceived under one and the same attribute, namely, thought. The idea of the mind, I say, and the mind itself, follow in God by the same necessity and the same power of thinking. For in fact the idea of the mind, that is, the idea of an idea, is nothing but the form of the idea in so far as it is considered as a mode of thinking without relation to an object. For as soon as someone knows something, he also knows that he knows, and at the same time he knows that he knows that he knows, and so on to infinity. (Baruch Spinoza, *Ethica* II, prop. 21, schol.)

e. Moreover, it must be confessed that the perception and what depends on it are inexplicable in terms of mechanical reasons, that is, by shape and motion. If we imagine that there is a machine whose structure makes it think, feel, and have perceptions, we could conceive of it enlarged, while preserving the same proportions, so that we could enter in to it as into a mill. Assuming that, if we inspect its interior, we shall find there nothing but parts which push one another, but never anything to explain a perception. Hence we should seek perception in a simple substance, and not in a composite or in a machine ...

If we wish to call soul everything which has perceptions and appetites in the general sense I have just explained, all simple substances or created monads might be called souls. (Leibniz, *Monadologia* 17, 19)

The cogito-passage (a) from the second meditation is famous and requires little explanation. In the sixth meditation, Descartes argues for what he calls a real distinction between mind and body, that is, the view that they can exist independently of each other. See Rozemond 1998 and Carriero 2009. Malebranche expresses the same position as Descartes, namely that the soul is independent of the body and the seat of all mental activity (b). Already Descartes himself had problems in explaining the union and interaction of the mind and the body. He claims that his late treatise on the passions aims at explaining this, but his solution remains obscure. See below pp. 499–500. Henry More, the most prolific of the Cambridge Platonists, argued for spiritual substances, such as God and the souls, which control inert matter and are themselves extended but not divisible (c). See Hutton 2007. Spinoza and Leibniz present different solutions to the mind-body problem. Spinoza argues that the mind and the body are the same thing conceived under different attributes (d). See Della Rocca 1996. Leibniz develops a kind of idealism with his monad ontology, the rational soul being the dominant monad in the organic body which it determinates. See Kulstad and Carlin 2007. Although the monads cannot communicate, God has determined their relations by a pre-established harmony. Leibniz did not think that mechanism can explain perception (e). He imagines the mechanical mind enlarged like a mill so that we could walk into it. All we see there are parts pushing against each other, but we will not see anything explaining perception.

7 Eighteenth-Century Idealism, Empiricism, and Scepticism

a. The ideas we have belonging, and peculiar to spirit, are thinking, and will, or a power of putting body into motion by thought, and, which is consequent to it, liberty. For as body cannot but communicate its motion by impulse, to another body, which it meets with at rest; so the mind can put bodies into motion, or forbear to do so, as it pleases. The ideas of existence, duration, and mobility, are common to them both. (John Locke, *An Essay Concerning Human Understanding* II.23.18)

b. We perceive a continual succession of ideas, some are anew excited, others are changed or totally disappear. There is therefore some cause of these ideas whereon they depend, and which produces and changes them. That this cause cannot be any quality or idea or combination of ideas, is clear ... It must therefore be a substance;

but it has been shewn that there is no corporeal or material substance: it remains therefore that the cause of ideas is an incorporeal active substance or spirit. A spirit is one simple, undivided, active being: as it perceives ideas, it is called the understanding, and as it produces or otherwise operates about them, it is called the will. Hence there can be no idea formed of a soul or spirit: for all ideas whatever, being passive and inert, they cannot represent unto us, by way of image or likeness, that which acts. A little attention will make it plain to anyone, that to have an idea which shall be like that active principle of motion and change of ideas, is absolutely impossible (George Berkeley, *Principles of Human Knowledge* I.26–27)

c. I may venture to affirm of the rest of mankind, that they are nothing but a bundle or collection of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement. Our eyes cannot turn in their sockets without varying our perceptions. Our thought is still more variable than our sight; and all our other sense faculties contribute to this change; nor is there any single power of the soul, which remains unalterably the same, perhaps for one moment. The mind is a kind of theatre, where several perceptions successively make their appearance; pass, re-pass, glide away, and mingle in an infinite variety of postures and situations. There is properly no simplicity in it at one time, not identity in difference; whatever natural propension we may have to imagine that simplicity or identity. (David Hume, *A Treatise of Human Nature* I, IV.6)

Empiricism in the later seventeenth and eighteenth centuries developed more and more towards idealism. Scepticism about the external world and the increased focus on impressions and ideas seem to force philosophy in that direction. Body is considered passive and mechanistic while the mind is active. Locke expresses this distinction clearly (a), and what we have access to is our ideas of things, not things themselves (see Jolley 1999). The view of the mind as a strong self-consciousness is gradually negated by Locke and Berkeley. Berkeley argues that we cannot know the mind in any direct sense (b). The culmination of this development can be found in Hume. He argues that there is really nothing but impressions and ideas, and the Cartesian ‘inner theatre’, as he calls it, is an illusion (c). See Bricke 1980.

Part II

Sense Perception

Chapter 4

Ancient Theories

Miira Tuominen

Ancient discussions on perception involved an important general assumption according to which cognitive capacities are distinguished by the objects at which they are directed. This assumption was explicitly formulated by Aristotle, and it was accepted in the later Platonic-Aristotelian tradition but challenged in Hellenistic philosophy. It was assumed that perception is about perceptible objects, whereas intellect is a capacity directed at what is intelligible. Further, the assumption also implies that various perceptual functions involve different sorts of objects: sight is about what is visible and sound about what is audible (1).

Another widely accepted supposition was that we perceive objects through some kind of interaction between the objects and our senses. This raises the question of how this interaction takes place and what it requires. Aristotle introduced the influential idea that perception is an interaction between two powers: the active and the passive. The terminology already occurs in Plato's *Theaetetus*, but we need not suppose that Plato was committed to this view. In the distinction, the active power is supposed to belong to objects, and the passive power to the percipient (2). Aristotle also assumed that the object of perception is its activating cause (4). In later Platonism, the understanding of perception changed: the interactive process was ascribed to the object and the sense organs, and perception came to be defined as rational judgement, reflexive awareness of or attention to the changes in our sensory system (7).

A central question concerning the interaction between the perceptible object and the percipient was how the objects affect us. Efficient causation was typically supposed to require physical contact, which seemed problematic with respect to those senses which have distant objects. In those cases, it had to be explained how the distance is overcome. While some thinkers supposed that the percipient's role is to

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be receptive (3–4), others assumed that the percipient reaches towards the object by emitting rays of light from or causing pneumatic tension through the eyes (5). These questions were also approached from an anatomical or a geometrical point of view. These considerations concentrated on the angle in which the rays of light are emitted from the eyes or on the anatomy of the eye itself (9). As a notable exception, Plotinus supposed that there can be causation at distance without physical contact due to the so-called co-affection (*sumpatheia*) within the ensouled universe (6).

Other important debates centred on the status of perceptible qualities. A central question was whether the perceptible quality exists prior to an act of perception (e.g., whether a colour exists when it is not seen). In the *Theaetetus*, Plato referred to ‘a secret theory’ according to which the quality comes into being when it is perceived, which Aristotle explicitly denied (2). Aristotle and many of the late ancient commentators operated with the idea that perceptible objects are external; they are not sense data or mental items. Qualities which we perceive exist as objective properties of external bodies. For example, a colour as a colour is an objective property of the physical body, but it also has the potential property of being perceived (e.g., visibility or audibility). This potentiality comes to be actualized in acts of perception: for example, a colour as actually seen only exists in acts of vision (2).

Ancient philosophers proposed various answers to the question of how the physical interaction between the object and the percipient is related to the change in one’s soul. In the *Timaeus*, Plato pointed out that seeing takes place when the effect which an object has on the fire emitted from the eyes is transmitted through the body to the soul, but he did not specify in detail how this transmission happens. Philoponus argued that the primary cause for perception is our psychic capacity to perceive. This capacity requires a certain physical constitution, and physical changes do take place when we perceive, but the physical changes are only contributory causes of perception. In later Platonism the view that the incorporeal soul uses the body as an instrument was widely shared (argued for in the *Alcibiades I*). It was assumed that the body as a lower corporeal thing is not capable of affecting or changing the soul which is a higher incorporeal being. Materialists such as the Stoics and the Epicureans supposed that, thanks to their material nature, the body and the soul interact with each other through physical causality (8).

Whereas Aristotle supposed that the internal nature of perception is not a central problem, as it is familiar to us through perceptions which we continuously have, the later Platonists started to analyse it in more detail. They built on Plato’s remarks on perception as a rational judgement, further developed by Plotinus. In addition to identifying perception with rational judgement, some commentators also argued that human perception must be rational: only rational capacities can be self-reflexive (7). Some argued that our reason attends to the effects which the external objects have on our sensory system. Others postulated an act in which our soul puts forward presentations for itself; it does not merely attend to the changes in the system.

Some ancient authors were sceptical about the idea that we can assert that our perceptions capture the qualities of external things accurately (10). The crux of Sextus Empiricus’ version of the argument is that it is equally possible that we do not perceive the qualities of things accurately as it is that we do. Therefore, he argued, we need to suspend judgement concerning the qualities of external things.

1 Cognitive Capacities Distinguished by Reference to Their Objects

a. If it must be said what each of them is, for example, what is the thinking, the perceptive, or the nutritive, it must first be said what thinking is and what perceiving is, for the activities and actions are prior in definition to the powers. And if this is the case, we must have considered their objects which are even prior to the activities, and for the same reason we must first distinguish them, such as nutrition, perceptibles, and intelligibles. (Aristotle, *De anima* II.3, 415a16–22)

b. When discussing the senses, we must first speak of the sensible objects. ‘Sensible’ is used in three ways of which two refer to things which are sensible as such, the third to what is sensible in an accidental manner. Of the former two, the first one means objects proper to the individual senses, the second one those which are common to all senses. I call ‘proper sensibles’ those which cannot be perceived by any other sense and about which we cannot be mistaken – for example, sight concerns colours, hearing sounds, taste flavours, and touch has more differences in its objects. Each sense discerns these and is not mistaken about whether something is a colour or a sound, but they may err as to what it is that is coloured or where it is, and what it is that has sound and where it is ... Movement, rest, number, figure, and size are common since these do not have proper senses but are common to all; for example, movement is sensible by touch and sight. We call that an accidental sensible when, for example, that which is white is the son of Diares; this is perceived in an accidental manner because it is accidental to the perceived white thing. This is because that which perceives is not affected by it as such. (Aristotle, *De anima* II.6, 418a7–24)

c. These are the attempts to prove that touch is not a single sense. Themistius says that they are irrefutable and that touch really is not one sense but several. About these two attempted proofs, he claims that Aristotle did not attempt to say anything about the second, but he did try to unsettle the first one [422b27–32] but he outsmarted us. As Themistius reports, Aristotle says that the other senses are not concerned with a single opposition but with several, for hearing has as its objects not only the high and low pitch, but in sounds there are rough and smooth ones, dark and light, great and small, and short ones. Similarly, in colours there are roughness and smoothness: smooth is such that it is pleasant to sight, for example, the colour of dawn; rough is such that it is painful. Themistius claims that, in saying these things, Aristotle argues falsely with us. For when saying that all senses concern one opposition of perceptible objects, it is clear that he was speaking of the proper sensibles and thus attempted to unsettle the argument that hearing is not only about high and low pitch but also about great and small ones. But the great and the small are common sensibles, and it had to be established whether the other senses have proper sensibles around several oppositions. Thus Themistius did not notice that he himself was arguing falsely. For the great and the small as said about sounds is proper to hearing alone, and therefore none of the other senses but hearing can discern the great and the small in sounds. (Philoponus, *In De anima* 408.24–409.7)

Aristotle distinguished between reason and perception and between different senses by referring to their objects (**a**, **b**); for the objects of different senses, see also Plato (*Theaetetus* 156c). The question of how many senses there are was discussed in Presocratic natural philosophy, and Plato's answer in the *Theaetetus* was still somewhat vague (see **2a** below). Aristotle argued that there are five senses (*De sensu* 2) and this view became dominant after him. Typically, he conceived the objects of a single sense as being determined by a pair of contrary opposites and as forming a continuum between them, for example, colours as continuous between black and white. Aristotle also introduced an influential list of seven colours and tastes situated within such a continuum (*De sensu* 4, 442a20–25). With respect to touch, the continuum was not equally clear – several pairs of contraries were assumed for the objects of touch – and this raised the question of the unity of the sense of touch (**c**). Philoponus's reference to Themistius is to his *In De anima* 72.25–36.

Aristotle supposed that senses are highly reliable with respect to their proper objects. 'Perception of the proper objects is true or allows for the least possible amount of error' (*De anima* III.3, 428b18–19). He did not want to deny perceptual error altogether but explained it by reference to external conditions, such as lighting, distance, or sickness, that cause the sense organ to malfunction. Hence the sense itself as presenting what it receives actually never errs. Further, there is no error which could be articulated as 'I thought I saw a colour but it was not a colour but a sound' (**b**). Alexander of Aphrodisias added (*In Metaphysica* IV 312.20–21) that malfunction can occur in the brain as well. For the commentators' discussion concerning the explanations of perceptual error, see further, Themistius, *In De anima* 57.17–29; 90.8–9 and 93.8–10; Philoponus, *In De anima* 313.27–314.4; 513.15–20; Alexander, *De anima* 66.15–16.

2 Perception as Interaction Between Powers

a. [M]otion has two forms, each of which is infinite in number. One has the power of affecting, the other of being affected. Through the intercourse and mutual friction of these, offspring are generated which are infinite in number but always in pairs so that one is the perceptible and the other the perception, always emerging together and born with the perceptible. The perceptions have the following names for us: they are called sight, hearing, smell, getting cold and hot, pleasure and pain, appetite and fear, and there are infinitely many nameless ones, and a great number of those which have a name. The genus of perceptibles is born in the same birth as these; all visions with colours, hearings with sounds, and all the other perceptions and perceptibles are born in the same birth. (Plato, *Theaetetus* 156a–c)

b. Thus the eye and some other thing which is commensurate with it and has come close to it generate both whiteness and the perception which is born together with it, and they would not have come to be if each of them had approached anything else. Then, in between them movement occurs, when vision comes from the eyes and whiteness from that which cooperates in the generation of colour. And then, the eye becomes filled with sight, and then it sees and becomes not sight but a seeing eye, whereas that together with which it generates the colour has become filled with whiteness and has become not whiteness but the white thing, be it wood or stone or whatever it is that happens to be coloured with this colour. (Plato, *Theaetetus* 156d3–e7)

c. Because the actuality of the perceptible object and the perceptive capacity is one, even though they differ with respect to being, it is necessary that hearing and sound which are spoken of in this way [i.e., as actual], actual flavour and taste, and the others similarly are simultaneously destroyed and preserved. But if they are spoken of in the potential manner, this is not necessary. But the earlier natural philosophers did not state this correctly when they held that there is nothing white or black without sight and no flavour without taste. In one way they spoke accurately, in another not. For perception and perceptible object are spoken of in two ways: potentially and actually; and of the latter the statement holds, of the former it does not. (Aristotle, *De anima* III.2, 426a15–25)

d. Actual perception is spoken of similarly as intellectual apprehension but the two differ in that those which can produce the activity of the former are outside: the audible, the visible, and similarly the rest of the perceptibles. The reason for this is that actual perception is of individual objects, whereas knowledge is of the universal, and those are in some sense in the soul. For this reason intellectual apprehension is up to the person to initiate when he wants to but perception is not; for it is necessary that the perceptible object is there. (Aristotle, *De anima* II.5, 417b18–25)

e. For as acting and being acted on are in that which is acted on but not in that which acts, in this way the actuality of the perceptible as well as that of the perceptive are in the perceptive. (Aristotle, *De anima* III.2, 426a9–11)

f. For the colour in actuality is not the same as sight in actuality nor is the sound in actuality the same as hearing because colours can exist even when they are not seen, but it is not possible for the sensibles themselves to be actual without perception. (Alexander of Aphrodisias, *In De sensu* 42.7–10)

In his *Theaetetus*, Plato reported a view according to which sensible objects do not exist before the act of perception but come about through an interaction between two powers: the power of acting and the power of being acted on (**a**, **b**). While Aristotle also operated with the model of active and passive

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powers – one of his basic theoretical tools – he denied that perceptible objects would be generated and destroyed in an act of perception. According to him, perceiving and being actually perceived are twins simultaneously born, but he argued that a perceptible object such as a colour does exist as a potentiality to be perceived even when this potentiality is not actualized in the percipient (**c**, **e**, **f**). (For a debate about the distinction between a colour being a colour and it being visible, see Themistius, *In De anima* 58.27–59.5, and Philoponus, *In De anima* 444.30–32; 438.18–20.) The activator of perception is also its object, an individual external thing (**d**, see also, e.g., Aristotle, *De anima* II.5, 417b18–21, Themistius, *In De anima* 56.17–23). For the requirement that there must be a medium between the percipient and the activating cause that initiates the process of seeing through the medium, see **4** below. There is no reason to attribute the view Plato reports in the *Theaetetus* (**a**, **b**) to Plato himself, and Aristotle did not do so either but attributed it to ‘earlier natural philosophers’ (**c**), see also Themistius, *In De anima* 84.18–22. For the status of the theory of perception in the *Theaetetus*, see Burnyeat 1990, 7–19; Bostock 1991, 62–70; Chappell 2005, 48–52.

3 Reception of Objects Through Atomic Effluence

a. Empedocles speaks about all senses in a similar way and says that we perceive through objects fitting into the pores of each sense organ. This is why the senses cannot distinguish each other’s objects because some of the pores are in a way wider and some narrower than the perceptible object so that some make their way through the pores without touching whereas others cannot enter at all. (Theophrastus, *De sensibus* 7=DK A 86)

b. He [i.e., Democritus] explains seeing by reference to reflection, which he describes in a unique way; for the reflection does not occur directly in the core of the eye, but the air which is between sight and that which is seen becomes compressed both by the object and that which sees, since there is always effluence arising from everything. Then the air which is solid and of a different colour is reflected in moist eyes. (Theophrastus, *De sensibus* 50=DK A 135; in *Doxographi Graeci*, ed. Diels (513–515))

c. Indeed, there are imprints which are similar in shape to the solid bodies and which far exceed the fineness of evident things. For it is not impossible that emissions arise in the surroundings [of a body] which are suitable for producing the hollowness and fineness, or effluences which preserve the sequential arrangement

and position as they had in the solid bodies. These imprints we call ‘images’ ... And no evident thing testifies against these images being of unsurpassed fineness, from which also follows the unsurpassed speed which they have; they also are such that each pore is commensurate with them so that even though there is almost an unlimited number of them, they do not collide at all, or collide only minimally, whereas many or infinitely many atoms collide immediately. In addition to these, the generation of images happens as fast as thought. For there is a continuous flow from the surface of bodies, and there is no evident exhaustion because of the mutual replenishment, and the flow preserves the arrangement and order of atoms of the solid body for a long time, even though it sometimes is confused... and we must deem it to be the case that it is through something coming to us from the outside that we see and think of shapes. (Epicurus, *Letter to Herodotus* 46–49)

d. An appearance is, according to them [i.e., the Stoics], an imprint in the soul – and about this there immediately were varying views. Cleanthes understood the imprint... to be like the one that comes about from a signet ring on wax, whereas Chrysippus considered such a view to be absurd. (Sextus Empiricus, *Adversus mathematicos* VII.228–229)

In Empedocles’ version of the effluence theory of perception, each sense has certain kinds of pores which only allow objects of a certain kind, as with larger bodies of equal size, round objects cannot be made to enter square holes (**a**). However, the emphasis in Empedocles’ theory, according to Theophrastus, is on the size of the objects rather than on their form. Further, it is not only that the effluences must fit into the pores; if the pore is too large, the effluence does not produce the effect and apparently does not cause us to perceive the objects from which the effluence is emitted. For the theory, see also Plato *Meno* 76c. Empedocles might have borrowed it from Alcmaeon of Croton (Barnes 1996, 478; see also Kirk, Raven and Schofield 1983). The atomists’ main claim is that perceptual change involves a flow or a passage of some physical particles from the object to the perceiver.

Democritus’ theory of perception is rather complex (**b**). In fact, according to Theophrastus’ report, Democritus is not only saying that the objects affect the air but that both the eyes and the objects press the air between the object and the sense organs and hence shrink the distance between the two (*De sensibus* 49–55 DK A 135). For the epistemological interpretation of Democritus’ theory and a criticism concerning Theophrastus’ reliability, see Lee 2005, chapters 8 and 9; for Democritus’ theory of vision, see also von Fritz 1953 and Baltes 1975. For the account in (**b**), see also Plato, *Theaetetus* 156d5–e7 above in (**2b**); see also the comments in **5** below.

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Epicurus' account (c) responded to two problems in the earlier versions of the theory. He explained (i) why we do not see films of atoms flying in the air and (ii) how the films of large objects fit into our (relatively small) sense organs. The first alleged fact was explained by reference to the unsurpassed speed with which the films proceed from the objects to the eyes. As to the second, Epicurus argued that the films of atoms diminish on their way from the object to the eyes but that they preserve their mutual arrangement.

Even though the Stoics are usually counted in with the proponents of the extra-mission theory of vision (see 5 below), the early Stoics also talked about an imprint (*tupōsis*) in the soul, and as we see from the excerpt from Sextus, Cleanthes described this as a physical impression (d). Chrysippus, by contrast, argued that it should rather be conceived of as a change or an alteration (*heteroiōsis*) than a physical imprint (Sextus Empiricus, *Adversus mathematicos* VII.230). For the Stoic version of the extra-mission theory of visual transmission, see 5 below. For the Stoic theory of perception, see Løkke 2008; cf. Brittain 2002.

4 Reception of Objects Through Medium in Aristotle and the Commentators

a. In general concerning all perception, it must be grasped that a sense is a capacity of receiving the sensible forms without matter, as the wax receives the mark of the signet ring without the iron or gold; it takes the golden or brazen mark, but not as gold or bronze. In a similar manner, each sense is affected by that which has a colour, a flavour, or a sound but not as what each of these is said [to be], but as a certain quality and according to its *logos*. (Aristotle, *De anima* II.12, 424a17–24)

b. For this is what it is to be colour: to be able to change the transparent the actuality of which is light. If someone places that which has colour upon the eye itself, it will not be seen. Rather, the colour changes the transparent, for example air, which, being continuous between the object and the organ, changes the sense organ... For seeing takes place when that which can perceive is affected in some way. While it is impossible for it to be affected by the very colour that is seen, it remains for it to be affected by the medium. (Aristotle, *De anima* II.7, 419a9–20)

c. Being acted on is not a simple expression either. First, it can refer to the destruction of a quality by its contrary. Second, it can also mean a kind of preservation of that which is potential by that which is actual, and which is like that for the actuality of which the other has the potential. The one who has knowledge comes to theorise, and this is not being altered at all (for it is a development to the thing to itself and to its actuality) but is another kind of alteration. (Aristotle, *De anima* II.5, 417b2–7)

d. On the basis of this it is clear, then, that in reality the activities from visible objects travel through the air without affecting it and come to be in the sense organs... and perceptual discernment occurs through the sense organs being affected in this way by them [i.e. the visible objects]. (Philoponus, *In De anima* 335.26–30)

e. As the liquid on the eyeball, being transparent itself, receives the imprints of colours from the external transparent medium and transmits them to sight, the air in the ears also receives sounds from the [air] outside and transmits them to hearing. (Themistius, *In De anima* 65.4–7)

f. It must be known that neither is the organ of touch qualified by every perception, nor, when it grasps heavy and light, glutinous and friable, rough and smooth, does the flesh become like that, but receives them only cognitively. For, as has often been said, every body is constituted by a mixture of moist and dry, warm and cold, and because of this whatever it undergoes through them, as a sense, it apprehends and cognises them, whereas as a natural body it is materially affected by them. (Philoponus, *In De anima* 432.36–433.4)

g. For the sense organ undergoes two effects, one as simply a body, another as a sense organ. As a body it is affected by body, as a sense organ by the activities of the sensible objects. For example, an eye as a sense organ is affected by being compressed or enlarged by the activities of colours; as a body it is, when it so happens, affected by fire, by being warmed, and an ear, similarly, as a sense organ is affected by sounds but as a body by the forceful movement of the air. (Philoponus, *In De anima* 439.15–21)

As to the question of how the active power of the object can activate the passive power of the percipient from a distance, Aristotle responded that, contrary to what the atomists had suggested and contrary to Plato's analysis in the *Timaeus* (see **5a** below), there is no effluence from the object to the eyes, nor are the eyes emitting fire or rays of light. Rather, it is the medium, i.e., illuminated air or water in between the object and the percipient that is capable of affecting our sense organs so that our capacity to perceive is activated (**b**). The colour affects the medium, the medium affects the eyes, and this change is instantaneous. The sense organ needs to have a suitable physical constitution to allow the form to be received without its matter (**a**). The change resulting from the interaction between the object and the percipient is not a simple change of quality (**c**). Rather, it is a change in which our natural capacity to perceive becomes activated. For perception as reception of forms without matter (**a**), see also Aristotle, *De anima*, II.12, 424b2; III.2, 425b22–23; III.4, 429a13–18; III.12, 434a29. For the necessity of the medium (**b**), see also Philoponus, *In De anima* 349.34–352.1 and Themistius, *In De anima* 62.12–19. It is surprising that, contrary to his account of perception in the

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De anima, in the *Meteorologica* (III.2, 372a29–34) Aristotle seems to say that optics confirms an extra-mission theory (cf. also *De caelo* II.8, 290a17–22).

Philoponus disagreed here with Aristotle about the instantaneousness of the change through the medium (**d**). He allowed that the activities (*energeiai*, a term Philoponus introduced to describe the effects that the perceptible qualities have on air) are travelling (*khōrousaí*) through the air, and the covering of the distance between the object and the percipient takes time but is really swift (413.6–7; 327.7–12). Philoponus adds that sounds move more slowly in the medium than the activities of visible objects; this is why we first see the lightning and hear it only later (Philoponus, *In De anima* 413.4–9 with reference to Aristotle's *Meteorologica* 369b7–11). In discussing the question of what happens after the object has in some way affected our sense organs, Themistius specifies that the sense organs transmit the effects caused by the objects to the senses themselves (**e**).

Philoponus affirms that the sense organs as sense organs are not strictly speaking altered (**f**, **g**; see also Themistius, *In De anima* 56.39–57.10 and 78.5–10). Rather, Philoponus puts it, the sense organs are affected in a cognitive manner (*gnōstikōs*), and such an effect can even take place in the flesh as the organ of touch (for Philoponus on the organ of touch, see *In De anima* 417.13–434.5). Even though Philoponus characterises this change as 'cognitive' (see also *In De anima* 438.10–15), he does not altogether deny its physicality. For example, when it comes to colours, he says that our eyes are compressed or expanded by their activities (**g**). He might refer to the fact that the size of the iris varies according to changes in lighting conditions (for expansion and compression, see also **5b** below). In sum, Philoponus indicates that a physical change in the organ is required for perception to take place, but perception is to be defined as a cognitive rather than a physiological process. For a somewhat different account of the commentators' theories of perception, see Sorabji 1991, 2005, vol. 1, 47–52; for the commentators' accounts of problems related to the metaphysical status of qualities in the medium, see Ellis 1990.

Contemporary debates concerning Aristotle's theory of perception have mostly concerned the question of whether the sense organ is changed by the perceptible quality and whether this accounts for perceptions. Richard Sorabji (1974) introduces the literalist position according to which something in the inside of the eye must turn white when we perceive white. Myles Burnyeat argues against this and introduces a different reading according to which there is no physical change in the organ at all; see Burnyeat 1992, 1993/1995, 2001, 2002. For Sorabji's response to Burnyeat (1992 and 1993/1995), see Sorabji 2001. For intentionality and its relation to Aristotle's theory of perception, see also Caston 1998. For other versions of the thesis that physical change is

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necessary for perception, see Everson 1997; Nussbaum and Putnam 1992. For an elaborate defence of the view according to which physical change is not essential in perception, see Johansen 1998. A counter-argument to all positions which favour one kind Aristotelian cause at the expense of others, see Bolton 2005. The core point of Bolton's view is that, according to Aristotle, all four modes of causes are necessary to define natural occurrences. Despite Burnyeat's claim to the contrary (2002), there is conceptual space between his position and Sorabji's and, as many other scholars have also claimed, Aristotle's theory should be located in this space. For the controversy, see also Caston 2005; cf. Caston 1997.

5 Extra-Mission Theories of Vision

a. The fire which is inside us... and unmixed, they made to flow through the eyes so that it is smooth and dense as a whole, but it particularly compresses the middle part of the eyes so that this part excludes everything coarser and only filters what is pure. Whenever there is daylight around the stream of vision, then like makes contact with like and becomes compacted together so as to form one body of light on the straight line from the eyes, and there that which strikes from the inside is pressed against that which encounters it from the outside. Because this body is uniform, it becomes similarly affected whenever it comes into contact with something, or something else comes into contact with it; and when it transmits these movements throughout the whole body up to the soul, it generates the perception we call 'seeing'. (Plato, *Timaeus* 45b–c)

b. [Of the particles carried from the objects] some are larger, some are smaller, and the former compress and the latter dilate the visual ray and are thus siblings to the hot and cold in the case of flesh and those which are sour in the case of the tongue, and all such things that produce heat and that we hence named 'pungent'. Black and white are the same as these affections, even though they belong to another class and produce other appearances because of these reasons. Thus we must name them like this: white is that which disperses the visual ray, black is what does the opposite. (Plato, *Timaeus* 67d–e)

c. Seeing happens when light is stretched conically between sight and its object, as Chrysippus says in the second book of his *Physics*, and Apollodorus agrees. Thus a conical shape of air is formed, the tip towards the organ of sight and the base towards the object, and that which is looked at is conveyed by the stretched air as with a stick. (Stoics reported by Diogenes Laertius, *Lives of Philosophers* VII.157 = SVF 2.867)

In the *Timaeus*, Plato presented a view of visual transmission according to which our eyes contain inner light that reaches out from them when there is light outside, and thus a body of light is generated. Vision occurs when something external touches this body of light, and the movements caused by this collision are transmitted to the whole body and reach the soul (**a**). The size of the particles carried from colours to the eyes explains the perception of different colours: the particles which are larger than the visual ray (*opsis*) compress the ray and produce the perception of black whereas smaller particles dilate the ray and cause the perception of white (**b**). The explanation reported in the *Timaeus* diverges from the one in the *Theaetetus* in the following respect: whereas in the *Timaeus* the light is proceeding from the eye and the external body simply comes in the way of this body of light, in the *Theaetetus* there is a two-way spatial movement (*Theaetetus* 156d2 and 181c–d) between the object and the percipient: vision comes out from the eyes and colour comes from the object, and these two meet in between the object and the percipient. This resembles Democritus' view as interpreted by Theophrastus (see **3** above). For a later version of the theory according to which the eyes emit visual rays, see also Galen, *On the Doctrines of Hippocrates and Plato* VII.5, 5–10 and VII.5, 32 and below in **9**.

Despite the 'materialist' account outlined in the *Timaeus*, Plato suggested that the physical interaction between internal and external light is not sufficient for seeing. In order for seeing to take place, the effects must 'reach the soul'. However, he did not explain in further detail how the physical processes are assumed to attain the supposedly immaterial soul. For the relation between soul and body in perception, see **8** below. For the view according to which the transmission to the whole body causes vision, see Democritus according to Theophrastus (*De sensibus* 54). For the Stoic view (**c**), see also Aëtius, *Placita* IV.15, 3 (= SVF 2.866); Calcidius, *In Timaeum* (= SVF 2.863); Aulus Gellius, *Noctes Atticae* V.16.2; cf. Cicero, *On the Nature of Gods* II.83. The metaphor of the walking stick reappears in Descartes, see below p. 87. The idea that visual transmission takes place through a cone-shaped intermediary is also found in Euclid, see **9** below.

6 Visual Transmission Without Physical Contact

a. If it is in the nature of a given thing to be sympathetically affected by another thing because it has some resemblance to it, the medium is not affected, or at least not in the same way (Plotinus, *Enneads* IV.5.1, 35–38).

b. This [i.e., the presence of forms in the air] is not a bodily affection but one in accordance with a greater psychic power of a sympathetic living unity. (Plotinus, *Enneads* IV.5.3, 36–38).

Plotinus introduced a view as to how the objects of vision affect the percipient that significantly deviated from those of other ancient schools (**a**). As opposed to most others, Plotinus held that not even mediated physical interaction between the object and the percipient is needed. Rather, the effect is transmitted through a ‘sympathetic’ influence from a distance (or ‘co-affection’, *sumpatheia*) explained non-physically (**b**). Cf. Plotinus, *Enneads* IV.5.4, 28–30. In IV.4.23, however, Plotinus indicates that some kind of bodily affection is needed in human sensory perception. Even in the case of a medium, he does not deny that there is something, for example, air, between the object and the percipient, but his claim is that this air or other material does not have a role in visual transmission; for Plotinus’s theory of visual transmission, see Emilsson 1988, 36–62.

7 Perception as Judgement, Attention, Reflexive Awareness

a. The soul as a whole extends to the senses, which are functions of it, like branches of a tree from the ruling faculty, to be reporters of what they sense, while it itself like a king passes judgment on what they have reported. The things which are sensed are, as bodies, composite, and each sense perceives one particular thing, this one colours, another sounds ... and in all cases as present; no sense remembers what is past or foresees the future. It is the function of inner deliberation and consideration to understand the affection of each sense, and to infer from the reports what the object is, and to apprehend what is present, remember what is absent, and foresee what will happen. (Stoics according to Calcidius, *In Timaeum* 220=LS 53G)

b. Perceptions are not said to be affections, but activities and judgements concerning affections. While affections arise from another, that is, a body having such and such a quality, the judgement arise from the soul, and judgements are not affections. (Plotinus, *Enneads* III.6.1, 1–4)

c. Just as sight having both potential and actual modes of being is the same in essence and its actuality is not an alteration, but it simultaneously approaches that to which it is essentially related and which it knows and discerns without being affected, similarly the reasoning part is related to the Intellect and perceives ... (Plotinus, *Enneads* III.6.2, 34–38)

d. When the soul senses in the body, it is not acted on by the body but acts more attentively upon the passions of the body, and these actions, whether easy because of agreeableness or difficult because of disagreeableness, do not lie hidden from the soul. And all this is what is called sensing. (Augustine, *De musica* VI.5)

e. Neither is it sensible to maintain that a body can make something in the spirit, for the spirit does not serve as the matter for a making body. That which makes is namely in every way more excellent than that out of which it makes something. And body is not in any way more excellent than spirit ... Although first we see a body which previously we were not seeing, and from then its image begins to be in our spirit by which we will remember the body when it is absent, nevertheless it is not the body that produces its own image in the spirit but the spirit which produces the image in itself with wondrous speed. (Augustine, *De Genesi ad litteram* XII.16 (467))

f. Through the example of the point he has sufficiently shown [Aristotle, *De anima* 427a9] the unaffected and active [nature] of perceptual judgement. (Pseudo-Simplicius, *In De anima* 200.14–15)

g. Clearly, the perceptible object, being individual and external, has to be there for the perceptive faculty; and it not only needs to be there but to present to the perceptive faculty so that it can act in a way on the sense organ and, the organ's being affected this way, the perceptive soul projects the common concepts of the perceptibles which are within it in a way appropriate to the effect, recognises the object in accordance with its own activity and being in accordance with the sensible object. (Pseudo-Simplicius, *In De anima* 124.32–125.2)

h. But clearly the perceptible object is perfected and brought to activity by the perceptive soul itself and it also projects the form of the perceptible from itself, but it has been stimulated to the projection by the change which occurs in the sense organ caused by the perceptible object. This is because neither is the perceptive life entirely separate from bodies nor does it project the appropriate concept on the perceptible object immediately but on the vital effect or the passive activity in the sense organ. (Pseudo-Simplicius, *In De anima* 192.12–18)

i. But more recent interpreters neither tremble at Alexander's frown nor pay heed to Plutarch, but pushing Aristotle himself to one side they have devised a newer interpretation. They say that it belongs to the attentive part of the soul to lay hold of the activities of the senses. For the rational soul, according to them, does not have only five powers, intellect, thought, opinion, rational wish, and choice; they add another sixth power to the rational soul, which they call 'attentive'. This attentive power, they say, stands over what happens to the human being ... If, then, they say, the attentive power has to go through all, then let it run through the sense and say: 'I saw', 'I heard'; for it is up to that which grasps one's own activities to say these things... (Pseudo-Philoponus, *In De anima* 464.30–465.34)

For the Stoics, it was an integral part of their theory of perception that we need to understand or interpret the appearances which come to us from the outside. This implies that, for adult human beings, perception is a function of 'internal reflection and reasoning' (*intima deliberatio et consideratio*, a).

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For an analysis of the content of Stoic perceptual appearances, see Barney (1992). Plotinus also defined perception as a judgement (*krisis*) which the soul makes concerning the affections of the sensory system (**b**). He emphasised that in this activity the soul is approaching or attending to what it has (**c**; cf. Fleet 1995, 96–97). In another context, he connected this idea with reflexivity: when the soul approaches what it has, it turns to itself (*Enneads* V.1.12, 12–20). What exactly it is that it turns or attends to is not completely clear. The most promising suggestions would seem to be appearances (*phantasiai*), notions, or even propositions. Plotinus' notion of judgement (*krisis*) is similar to Plato's and deviates from the one used by Aristotle (and such commentators as Themistius). For Plato and Plotinus, *krisis* means rational judgement, whereas for Aristotle it is the discernment of objects from others (see also *Posterior Analytics* II.19, 99b35).

According to Augustine, corporeal things cannot affect the immaterial soul (*anima*) or the spirit (*spiritus*) because the soul or the spirit is a higher entity than the body (**e**). He combined the view that the sensible form has an effect on the sense organ with the idea that perception itself is an act of attention of the soul (**d**). When he explained seeing, Augustine argued that the active intention of the soul guides the process in which a likeness of the external visible form is created in the sense organ (*De trinitate* XI.4.7; see also *De trinitate* XI.2), implying that we are aware of the changes in the organs. However, this is not what perception is, but, in addition, the soul produces an inner image which allows us to imagine and remember the object. When the soul is aware of the external things in perception, it is aware of this very image (**e**). In his account of visual transmission, Augustine adopted the Stoic simile of the stick touching objects (*De quantitate animae* 41–44). See O'Daly (1987, chs. 3–5), Brittain 2002. For the expression 'does not lie hidden from the soul' in (**d**), see also *De quantitate animae* 48. For the idea that the body cannot affect the soul in Augustine's theory, see also *De trinitate* XI.2.3.

In a commentary which some manuscripts mistakenly attribute to Simplicius (for the discussion concerning the authorship, see Bossier and Steel 1972; Hadot 1987, 2002), perception proper is identified with the projection of common concepts the perceptive soul performs when the sense-organs are affected by the external objects (**f**, **g**). The projection is not strictly speaking caused by the effects in the organs (and thus by the external objects), but the soul has been 'stimulated' or 'awakened' to the projection by the change in the organs (**h**). The kind of passive or receptive activity which Aristotle sees as an actualization of a perceptible object *as perceptible*, is in Pseudo-Simplicius ascribed to the sense organs and it cannot, for him, amount to the full perception of the object that needs to derive from the activity of the perceptive soul which he understands as being rational.

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Thus, for Pseudo-Simplicius, human perception is rational and needs to be identified with rational judgement rather than with the receptive activity (187.27–29), and this, together with rational self-reflexivity (187.29–36) distinguishes human perception from perception in other animals. Proclus denied this claim and argued that all animals that have a cognitive faculty (which he specified to mean appearance, memory, and perception) are also rational, and hence human and non-human perception do not diverge in this respect; see *Platonic Theology*, ed. Saffrey and Westerink III.6, 23, 25–24, 2; translated in Sorabji (2005, 60). Pseudo-Simplicius attributed the supposition that perception is rational to Iamblichus (Pseudo-Simplicius, *In De anima* 187.37). For further references, see Lautner (2000, 435–436 and Lautner 2004). The crucial difference between Augustine's theory (**d**, **e**) and the projection (*proballein*) found in Pseudo-Simplicius (**g**) seems to be that whereas in Pseudo-Simplicius there is a projection of common concepts on the perceptible objects and their effects on our senses, for Augustine the intention creates an object of its own, an image. Pseudo-Philoponus (in a commentary which has been mistakenly transmitted under Philoponus' name) did not talk about projections, presentations, or images which the soul would make for itself. Rather, he argued that there is a separate rational part (*to prosektikon*) which attends to everything that takes place in the soul (**i**). This was not restricted to the sensory soul but also included growth and other vegetative functions (465.1–5). For his view, see also Pseudo-Philoponus *In De anima* 467.5–9; 477.21–482.6; 560.9–561.18.

The Neoplatonic commentators on Aristotle often maintained the view that reception of forms is necessary for perception (e.g., Pseudo-Simplicius, *In De anima* 188.3; 190.6–10) but identified perception rather with rational judgement. For more texts on these developments, see Sorabji 2005, vol. I, 33–43.

8 Psychophysical Interaction in Perception

a. Socrates: So, a human being uses the whole body?

Alcibiades: Very much so.

Socrates: And that which uses and that which is used are different things?

Alcibiades: Yes.

Socrates: Thus the human being is different from his or her body.

Alcibiades: So it seems.

Socrates: What, then, is the human being?

Alcibiades: I cannot say.

Socrates: But you can say that it is that which uses the body.

Alcibiades: Yes.

Socrates: And what else uses the body rather than the soul?

Alcibiades: Nothing other. (Plato (?), *Alcibiades I*, 129e–130a.)

b. Having shown that those which do not have sense are also affected by the sensible objects (for that which is actually transparent is affected by colours and the air by odours and sounds) he reasonably enquires – because the sense organs are also affected by them – how the sense organs differ from those which are not sensitive, given that both are affected by sensible objects; for both seem to be affected in the same way ... It does not suffice for perceiving to be capable of receiving the form without matter, but a psychic power is needed, which is not in all that are capable of receiving the form without matter. If something is somehow affected by a sensible object, it does not yet perceive, for otherwise also water and air and mirrors would perceive, but a power is needed which is capable of distinguishing these kinds of things, the effects which the sensible objects have on us, and which is not in every body, but only in a natural body with organs, as he has shown, and, in that body, not in its every part, but in a part that because of such proportionality and suitable mixture is capable of receiving this power. (Philoponus, *In De anima* 444.11–26)

c. We must know that it is as a material cause that flesh is a cause. For it is not productive of thought unless as a contributory cause. It is because of a conjunction that the psychic movements have joint dispositions with the mixtures of the body, and the psychic movements are not generated by the mixture, but without such mixtures they could not come about in this way. (Philoponus, *In De anima* 388.23–27)

d. I account for it thus: as a living body is illuminated by the soul, each of its parts taking part in the soul in accordance to the organ and its suitability for a certain function, and it has the power which accords to the execution of the function; in this way it must be said that in the eyes lies the seeing power, in the ears the one for hearing, and in the tongue for tasting, for smell in the nose, and the sense of touch is present throughout; for such apprehension the whole body is an instrument at the soul's service. (Plotinus, *Enneads* IV.3.23, 1–9)

In the *Alcibiades I*, a dialogue originating from Plato's school, we find the view according to which the soul uses the body as an instrument (**a**). This account seemed to state that the priority in explanation is from the soul to the body, not the other way around. Even though Philoponus assumed that sense perception requires physical changes, these changes are not the primary causes of perception (**b**, **c**). Rather, what is crucial is that we have a psychic capacity to perceive, and our material constitution and the physical changes in

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the process are necessary for perception. In Philoponus' terms, the material is not the productive (*poiētikos*) cause of our psychic qualities and capacities but only a contributory cause (*sunaition*; for the notion of a contributory cause, see also Plato's *Timaeus* 46c–d, 47e–48a, 68e–69a). The productive causes are the psychic powers. Following the *Alcibiades I*, late ancient Platonists laid great stress on the general view according to which the organs and bodily parts are instruments of the immaterial rational soul. This general assumption was expressed by Plotinus (d) and it also occurs in Augustine, see (7d). For the Stoics, it was an important argument for the physicality of the soul that it needs to have causal effects (for the soul, even the rational soul, as *pneuma*, see Diogenes Laertius, *Lives of Philosophers* VII.138–139=LS 47O; see also Philo of Alexandria, *Allegories of Laws* II.22–23=LS 47P).

9 Geometry, Anatomy, and the Visual Field

a. Let it be hypothesized:

1. That the rectilinear lines proceeding from the eye cover the transversal extension of large magnitudes.
2. That the shape that comprises those visual streams that are emitted from the eyes is a cone the apex of which is in the eyes and the base adjacent to the limits of the things seen.
3. That those things on which the visual streams fall are seen and that those things are not seen on which the visual streams do not fall.
4. That those things that are seen from a larger angle seem larger and those from a smaller angle smaller, and those that are seen from an equal angle seem equal.
5. That those things that are seen through higher rays seem higher and things that are seen through lower rays seem lower.
6. And similarly, those things that are seen through rays that are more to the right seem to be more to the right and those that are seen through rays that are more to the left seem to be more to the left.
7. That those things that are seen from a greater number of angles appear more clearly. (Euclid, *Optica I HOR*, 1–19)

b. The structure [of the eyes] teaches you that some *pneuma* is transmitted through these passages [optic nerves] to the eyes; [this is also shown by] the fact that when one of the eyes is closed, the pupil of the other one widens, and when the eye is opened, the pupil immediately returns to its natural size. It is not difficult to grasp that when the grape-shaped membrane [i.e., the choroid membrane] is stretched by some substance and when the substance fills its inner space, it is necessary for the aperture in the pupil to be widened, otherwise it would be impossible; and that the

speed of the emptying and filling is not one of a liquid flowing in, but is solely the function of a pneumatic substance. And because both passages [optic nerves] lead to the same point – and dissection shows this clearly – it is reasonable that this common space receives the *pneuma* from both passages. (Galen, *On the Doctrines of Hippocrates and Plato* VII.4, 10–13)

c. We say that in fact the optic *pneuma* comes down from the brain through optic nerves and reaches down to the lens, where their endpoints are. For this reason also the discernment of the visible objects happens there, and for this reason the lens is also transparent: in order for the activities of the visible objects to be transmitted through it to the optic nerve. (Philoponus, *In De anima* 336.33–37)

d. Sight sees in accordance with straight lines and, according to the first account, it perceives colours but it also cognises together with them the coloured body and its size, shape and location, the distance, number, movement and rest, roughness and smoothness, evenness or unevenness, sharpness and bluntness, and its constitution, whether it is watery or earthy, for example, and liquid or solid. However, its proper object is colour because we cognise colours through sight alone. The coloured body, the place in which the seen object happens to be, and the distance between the seer and the seen follow immediately, together with colour ... Because sight cognises its proper objects from a distance, it necessarily follows that sight by itself sees the distance, and the size is seen by sight itself when its appearance can be caught at a single glance. In cases where the object of sight is larger than what can be seen with one glance, vision also needs memory and reason. For then it sees the object only partially and not as a single whole; and thus it is necessary for sight to pass from one to another ... When the number of the objects is greater than three or four, such that cannot be seen at a single glance, and with respect to the movements and shapes of polygonal things, they cannot be grasped by sight alone but always with memory and reason ... The only function of the sense by itself is that which affects the sense in one impact; that which affects the sense through several impacts are not the functions of the sense alone but also of memory with reason as has been shown above. (Nemesius of Emesa, *De natura hominis* 7, 59.18–61.5)

Almost all the 58 theorems of Euclid's optics were based on the seven postulates given in **a**. Euclid's geometrical optics excluded all such aspects of the visual process that are not strictly reducible to geometry. However, one important assumption was made in the theory, namely, that there are visual streams or rays proceeding from the eye to the object. Ptolemy deviated from Euclid in postulating a continuous visual flux in the form of a cone, not discrete and numerable visual rays. Ptolemy complemented Euclid's theory by explaining

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that the quality of the object affects the visual cone, and the cone then affects the eyes; cf. the Stoics above in **5c**. For Euclid's and Ptolemy's theories, see Lindberg 1976; Cohen and Drabkin 1958, 257–258. For the optics of Claudius Ptolemy, see also Smith 1996.

Philoponus also discussed at some length the geometry of perception (e.g., *In De anima* 339.17–341.9) but denied the supposition of visual rays or streams. The geometry he applied was somewhat similar to that found in Euclid, but Philoponus talked about activities (*energeiai*) coming from the objects rather than rays or streams (*opseis*) emitted from the eyes. For Galen's discussion concerning the anatomy of the eye (**b**), see also *De usu partium*, book X. Galen's views of the brain, *pneuma* and nerves, particularly as systematised in later Galenism, strongly influenced the late ancient authors (such as Philoponus **c**; for the Galenic influence on Philoponus, see also Todd 1984; see pp. 106–107 for the *De anima* commentary). Plotinus also took it as a basic fact that the nerves start from the brain (*Enneads* IV.3.23, 1–9 quoted above in **8d**). He argued that the sensitive part of the brain is the medium through which reason operates. Therefore, he appropriated the Aristotelian vocabulary of the medium by dropping Aristotle's assumption according to which the external medium affects us (**4b**).

Nemesius of Emesa described visual perception as an active and complex process in which information from other cognitive capacities, such as memory and thought, are also used to create a more comprehensive visual field. Nemesius also stressed that our visual experience is of bodies, shapes, and distances, not just of colours, but this requires that memory and thought aid our sight (**d**). For a somewhat similar analysis, see also Strato of Lampsacus, fragment 111 in Wehrli 1950. For the co-operation of sight with memory and reason, see also Galen, *On the Doctrines of Hippocrates and Plato* VII.6.24 (460.26 in De Lacy); for ample notes on parallels for Nemesius' view, see the translation of his *De natura hominis* by Sharples and van der Eijk (2008, 107–108). As to the question of how distances are seen, Galen also proposed the influential view that we calculate the angle in which the visual rays emitted from our two eyes meet the object (*De usu partium* 10.12). The idea of the explanation is that we register the angle and calculate the distance almost automatically.

10 Sceptical Reactions to Perception

a. That what is evident is deemed by our opponents to be that which is grasped by itself and does not need anything else to attest to it. But nothing is of such a nature as to be grasped by itself, rather everything is grasped through an affection, which

is different from that which produces it and the object of appearance. For when I have received honey and become sweet, I estimate that the external substance of honey is sweet, and when I have warmed myself by the fire, I take my own condition as a mark that the external substance of fire is hot, and with the other sensible objects I make the same inference. Since that which is grasped through something else is agreed to be non-evident, and all things are grasped through our affections that are other than those things, all external things are non-evident and hence unknown to us. In order for the non-evident things to be known to us, something evident needs to be present, and if it is not present, the apprehension of the non-evident also disappears. Nor is it possible to say that even though, on the basis of the above argument, external things are non-evident, they will be grasped by us with certainty because the affections are secure signs. (Sextus Empiricus, *Adversus mathematicos* VII.364–367)

b. The affections are graspable. They [the Cyrenaics] affirm this but not those from which the affections come. (Cyrenaics reported by Diogenes Laertius, *Lives of Philosophers* II.92)

With respect to Sextus' argument (**a**), it is important to note that his conclusion is not that we cannot know anything about the external objects' qualities. He does not claim that it would be impossible that our senses give us information about qualities of external things themselves. Rather, his point is that we cannot assert with certainty whether or not they do. For his argument, see also *Adversus mathematicos* VII.354. Even though the Cyrenaic dictum (**b**) seems to imply some sort of perceptual scepticism or subjectivism, we do not know the context well enough to determine how we should understand the passage. This is because it is possible that the fragment is related to the Cyrenaics' ethical hedonism and is not a developed position concerning whether we can grasp anything external at all. For the interpretation that the passage entails epistemological subjectivism, see Tsouna (1998). For the claim that affections can be known but objects not, see also Sextus Empiricus, *Outlines of Pyrrhonism* I.215; Plutarch, *Adversus Colotem* 1120c–d.

Chapter 5

Medieval Theories

Simo Knuuttila and Pekka Kärkkäinen

Early medieval Latin discussions of perception were largely influenced by Avicenna's *Liber de anima*. His description of the five external senses combined Aristotelian and Galenic medical ideas. Some medical views were also known through the *Pantegni* of 'Alī ibn al-'Abbās al-Mağūsī and the works of Costa ben Luca, Nemesius of Emesa and John Damascene. While Avicenna's approach also included the Neoplatonic conception of the soul as the active perceiver which uses corporeal instruments, this was not a central theme in his *De anima* and was rather known through Augustine's works. Aristotle's theory became dominant when his *De anima* was included in the university curriculum in the middle of the thirteenth century. Following Averroes, Latin Aristotle commentators were particularly interested in the nature of the medium change and the reception of the sensory species of the object without matter.

Aristotelian perceptual realism involved the teleological idea that the passive sensory powers and their extra-mental objects constituted a relational whole in which the objective perceptibility of things was actualized when the sensory qualities activated the corresponding sensory powers. This model was somewhat qualified though not refuted by the early fourteenth-century interest in the subjective reception of sensory content and the tendency to combine Aristotle's view of passive perception with various active elements.

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Avicenna distinguishes between five external and five internal senses. Physiologically speaking, external sense perceptions (other than that of smell) take place in the sensory nerves (1). These nerves join the sense organs to the front part of the brain, the seat of the common sense which as an internal sense combines the acts of external senses, thus making them perfect. Latin Aristotelians also hold that the common sense as the primary subject of perception distinguishes and synthesises between various sensory contents. They usually deviate from Avicenna in teaching that the perception of perception takes place in the common sense (2). For medieval discussions of the common sense, see also pp. 137–139.

It was a common medieval view that the changes of the sense organs and the medium are a necessary requisite for sense-perception. Thirteenth-century commentators on Aristotle's *De anima* argued that perceptions are actualizations of passive potencies – the senses are actualized by their objects, the sensible forms, which are in a special manner received by the sense organs and cause the sensory acts about objects (3). Most Latin writers assumed, like Aristotle and Averroes, that the sensory medium is changed in a non-perceptible manner by the sensory form and, furthermore, that there is a similar change in the sense organ when it receives the form. According to Averroes, the soul receives the 'intention' of the sensory form which has a 'spiritual' existence in the medium and in the sense organ. This terminology became dominant in the thirteenth century. The spiritual change brought the sensory forms into an activating contact with the sense-power – it was an axiom of Aristotelian physics that a passive power was activated by an active power only when these were in contact (4). The Averroistic view of the species in the medium was associated with the questions of optics by Roger Bacon and some other Latin authors – this interest was strengthened by the translations of Alhazen's *Perspectiva* and other optical treatises (5).

Augustine's Neoplatonic followers believed that perceptions, instead of being passive receptions, are apprehensions of physiological changes and their causes, having as content the exact likenesses which were formed by the soul without an external causation. This view was argued for by some influential early medieval authors and later by Robert Kilwardby, who presented it as a challenge to the Aristotelian theory (6). Averroes suggested that perceptions might be associated with an agent sense which is analogous to the agent intellect. Some Latin commentators followed Averroes, and it became increasingly usual to add some active elements, whether Averroist or Augustinian, to the Aristotelian theory (7). Even though the theory of spiritual change remained popular until seventeenth-century Aristotelianism, it was also criticised. In Ockham's view it is not less problematic to assume that an object directly activates a sense-power at a distance, without any mediation. Ockham's suggestion did not find many adherents (8). While the vision was the favourite sense in medieval philosophy, there was also some interest in other senses, sometimes beyond Aristotle's works (9).

Medieval Aristotelian realism involved the metaphysical conception of the formal sameness or likeness between the sensible form in the object and in the sensory power. New questions were associated with the perceiving subject. It was realised that the sameness of the species does not explain how the content of a sensitive act is present to its subject. Duns Scotus stressed the difference between receiving the

form and forming an intentional act with respect to an object. This added to the interest in misperceptions and various conceptual and subjective elements in perceptions (10).

1 Avicenna's Classification of External Senses

a. But the power which perceives is twofold: one power perceives from outside, another from inside. Those which perceive from outside are five or eight senses.

One of these is vision, which is a power located in the optic nerve for perceiving the form of that which is formed in the crystalline humour from the likenesses of the coloured bodies. These likenesses come through actually radiant bodies to the polished surfaces.

Another of these is sense of hearing, which is a power located in the nerve which is expanded over the surface of the optic nerve [better: ear-hole] for perceiving the form which comes to it from the movement of the air compressed between the striking and struck objects, the latter resisting the forced compression. This produces a sound, whose movement arrives in the still air stored in the cavity of the optic nerve [better: ear-hole] causing in it a similar movement which touches the nerve.

Yet another of these is smell, which is a power located in two protuberances of the anterior part of the brain, which are similar to the nipples of the breasts, for perceiving that which the inhaled air transfers from the odour. This is either in the vapour mixed with air or imprinted in the air by virtue of the change which the odorous body causes.

Yet another of these is taste, which is a power located in the nerve which is expanded over the body of the tongue for perceiving the tastes, which are released from the bodies touching it when they are changed by a mixture with the saliva of the tongue.

Yet another of these is touch, which is a power located in the nerves of the skin and flesh in the entire body for perceiving that which touches it and affects by means of a contrariety which changes the mixture and the affection of the composition. Some authors think that this power is not the most special species, but instead a genus of four powers or even more, which are all distributed in the entire body. One of these perceives the contrariety between warm and cold, the second between dry and moist, the third between hard and soft, and the fourth between rough and smooth. However, since these are all gathered in one instrument they are considered as being essentially one. (Avicenna, *Liber de anima* I.5 (ed. van Riet, 83–85))

b. Notice that there are nerves descending from the anterior part of the brain with the sensory spirit and being perfected in their extremes; for example, one of the nerves descending from the anterior part ramifies so that from the extremes of these branches there are formed pupils and the disposition of the eyes which are the organ of vision. (John of la Rochelle, *Summa de anima* II.93 (234–235))

c. Vision takes place through two concave nerves which are called optic nerves, and through these two nerves the animal spirit is moved from the first ventricle of the brain to the eyes, where these are affected by the visible as a colour and then return to the fantastic part, bringing the species of the colour to the soul. (Anonymous, *Sententia super II et III De anima*, ed. Bazán, II.14 (161))

Avicenna's classification (a) is also found in *Kitāb al-naǧāt*; see Rahman 1952, 26–27. In the Latin translation the word 'ear-hole' is mistakenly rendered 'optic nerve'. For the Latin reception, see Dominicus Gundissalinus, *De anima*, 68–9; John Blund, *Tractatus de Anima* 9 (24); 12 (39); 14.1 (51); 15 (56); 16 (58); John of la Rochelle, *Tractatus* II.1.4 (73–74); Peter of Spain, *Scientia libri De anima* VI.6 (219); Albert the Great, *De homine* 19.1 (166), 23 (228); 28 (254); 32.1 (272–273); 33.1 (281–283); further references in Hasse 2000, 244–246. Similar approaches based on ancient medical theories were also known through Nemesius of Emesa, *De natura hominis* 6–10 (for example in Albert the Great, *De homine* 19.1 (165a)), John Damascene, *De fide orthodoxa* 32 (for example in John of la Rochelle, *Summa de anima* II.68), the *Pantegni* (for example in William of St. Thierry, *De natura corporis et animae* I.39–46) or Costa ben Luca, *De differentia spiritus et animae* (ed. Wilcox, 151–162) (for example in Anonymous, *Lectura in librum De anima*, ed. Gauthier, II.25 (421)).

In distinguishing the senses, Avicenna concentrates on the five external organs and the sensory nerves which form the bodily machinery which receives the forms of sensible things. External objects are then perceived by the faculty of perception. The fine corporeal animal spirit in the nerves is a mediator between the sensory faculty of the soul and the bodily organs. For the soul using organs and the spirit, see Avicenna, *Liber de anima* II.2 (ed. van Riet, 120–130); V.7 (ed. van Riet, 164–166); V.8 (ed. van Riet, 175–185); for Avicenna's view of the soul and perception in humans and animals, see Kaukua and Kukkonen 2007; for vision, see Hasse 2000, 107–127. The nerves and the spirit are discussed in the *Pantegni* and the texts of Nemesius of Emesa and Costa ben Luca mentioned above. In authors who employ the medical spirit model, the animal spirit moves from the brain to the nerves and the sensory imprints in the nerves somehow proceed to the foremost part of the brain, which is the seat of the common sense (b–c); see also John of la Rochelle, *Summa de anima* II.97 (240–241); Albert the Great, *De homine* 19.1 (166a); Anonymous, *Lectura in librum De anima*, ed. Gauthier, II.25 (421–422); Peter of Spain, *Scientia libri De anima* VI.6 (216–219); Robert Kilwardby, *De spiritu fantastico* 164.

2 Common Sense and External Senses

a. This power is called the common sense, the centre of all the senses from which they derive like branches and to which they return, and this is what actually senses. (Avicenna, *Liber de anima* IV.1 (ed. van Riet, 5))

b. The form which is seen is imprinted again in the spirit which carries the power of the common sense, and the common sense receives that form, and this is the perfection of vision. The power to see is outside the common sense, although it emanates from it. I want to say that the power to see sees and does not hear or smell or touch or taste, but the common sense sees and hears and so on. (Avicenna, *Liber de anima* III.8 (ed. van Riet, 269))

c. The sensory power is spread to the organs of the five senses from one common root; the sensory power proceeds from this to each organ, and the impressions of particular organs are terminated at this ... This common sensory principle can simultaneously apprehend several things, as far as it is considered twofold as terminating two sensory impressions, but as far as it is one, it can discern the difference between one and the other. (Thomas Aquinas, *Sententia libri De anima* II.27 (185))

d. Some people think that these common sensibles have a sense in animals in which they come and by which they are apprehended. But this is not true (Avicenna, *Liber de anima*, III. 8 (ed. van Riet, 283))

Like Aristotle, Avicenna assumes that there is an ultimate centre of perception which somehow makes various perceptions perfect (**a**, **b**). The perfection means that the perception is integrated in a larger perceptual content. The differentiating and unifying sensory centre is assumed by most Latin authors in the same way as does Aquinas (**c**). While Avicenna criticises the view that Aristotelian common sensibles would be perceived by one special sense (**d**), Averroes holds that the common sense has the common sensible as its proper objects (*Commentarium magnum in Aristotelis De anima libros* II.63–65 (225–229)). Medieval authors usually interpret the common sensibles, as distinct from the proper objects of the senses, as objects of several senses. See Anonymous, *Lectura in librum De anima*, ed. Gauthier, II.24 (413–415); Anonymous, *Quaestiones in De anima*, ed. Giele, II.14 (90–91); Anonymous, *Quaestiones in De anima*, ed. van Steenberghen, II.21 (233). Thomas Aquinas puts forward the common opinion: ‘It is false that these common sensibles are the proper objects of the common sense’ (*Sententia libri De anima* II.13 (119)).

While some commentators of *De anima* take Aristotle to mean that the perception of perception is imbedded in the acts of particular senses as the sensory awareness of actual perceiving or its absence (Aquinas, *Sententia libri De anima* II.26 (178–180)), the majority understand him to mean that this is a separate common sense act about particular sense acts, as Aquinas also does in *Summa theologiae* I.78.4, ad 2; see also Anonymous, *Lectura in librum De anima*, ed. Gauthier, II.24 (410, 416); Anonymous, *Quaestiones in De anima*, ed. Bazán, II.39 (463); John Buridan, *Quaestiones in De anima* II.22.

In dealing with the question of the physiological seat of the common sense, early medieval thinkers usually follow the brain-centred view of cognitive functions in Nemesius of Emesa, *De natura hominis* 7, Augustine, *De genesi ad litteram* VII.13, 17 (212, 214), *Pantegni* XIV.19, or Avicenna, *Liber de anima* V.8 (ed. van Riet, 176.76–181.54). Avicenna attempts to reconcile this with Aristotle's heart-centred view by arguing that the spirit which functions in the brain is first generated in the heart; see his *Canon* I.1.6.1; cf. Averroes, *Compendium libri Aristotelis De somno et vigilia*, ed. Shields, 84–85; *Colliget* II.29, 31–32. After the Aristotle reception in the middle of the thirteenth century, the brain-centred consensus is somewhat undermined; see, e.g., Anonymous, *Quaestiones in Aristotelis De anima*, ed. Bazán, II.40 (464–465). The brain-model is accepted by Pietro d'Abano who discusses the topic as one of the controversial questions of his time (*Conciliator*, d. 38, f. 58vb–60ra, d. 41, f. 63ra–b). Buridan argues for the Aristotelian heart-centred view (*Quaestiones in De anima* II.24) and finds some adherents among philosophers, but there are also supporters of the brain-model which is dominant in the Renaissance time. For the heart-brain controversy, see Knuuttila 2008, 12–14; Siraisi 1987, 515–524.

3 Sense as a Passive Power

a. Senses, however, are passive potencies of a certain kind, having the nature of being changeable by external sense-objects. The external cause of this change is what is *per se* perceived by the senses, and sensory powers are distinguished according to the diversity of that cause. (Thomas Aquinas, *Summa theologiae* I.78.3)

b. Everything that is perfected from potency to act by something which causes its transmutation and change is a passive potency, since it is the nature of a passive potency to be a principle of being changeable by something else. Senses are like this, for they are receptive of species without matter, as clay is receptive of the form of a signet without bronze. (Anonymous, *Quaestiones in De anima*, ed. van Steenberghen (225))

c. First, then, he remarks that being affected is spoken of not in one way but in many ways, just as potentiality and actuality are spoken of not simply but in many ways. Being affected is in one way spoken of with respect to a corruption caused by a contrary, for being affected, in the proper sense, seems to imply a loss of something to the patient through its being overcome by the agent ... In another and less proper way, being affected is spoken of as implying a kind of reception. And as a receiver is to what it receives as potentiality is to actuality, and actuality is the perfection of a potentiality, so being affected is not spoken of in this way with respect to any corruption in what is affected, but more with respect to a kind of preservation and perfection of what is potential through what is actual. (Thomas Aquinas, *Sententia libri De anima* II.11 (111–112))

d. What each of these are in actuality, for example, how a colour is in actuality when it is perceived by a sense, and the same with taste and other sensory objects, is explained in *De anima*, that is, how each of these is the same as or another than a sense in actuality, such as vision or hearing, for the visible in actuality is the same as the vision in actuality, but the visible in potentiality is not the same as the vision in potentiality. (Thomas Aquinas, *De sensu et sensato* 6, n. 79)

Mid-thirteenth century Aristotelians regarded perceptions as actualizations of passive sensory potencies activated by external objects (**a**, **b**); see also Anonymous, *Sententia super II and III De anima*, ed. Bazán, II.11 (126–130); *Lectura in librum De anima*, ed. Gauthier, II.10 (272, 276–277); Peter of Spain, *Scientia libri De anima* VI.9 (230–231); Peter of Spain (pseudo), *Expositio libri De anima*, II.5 (162–170); Albert the Great, *De homine* 34.1 (295–297); Albert the Great, *De anima* II.3.1 (96.36–97.51); II.3.2 (99.35–99.87); II.3.6 (107.40–82); the anonymous *Quaestiones in Aristotelis De anima*, ed. Giele, II.11 (85–88); the anonymous *Quaestiones in Aristotelis De anima*, ed. Bazán, II.15 (427–428). The senses could be divided by referring to the nature of their primary activators or proper objects, these being the same in Aristotelianism (*De anima* II.5, 417b20–21); see also **4** below. Commentators usually paid attention to Aristotle's remark in *De anima* II.5, 417b2–7 that the actualization of potency as such differs from standard qualitative changes in which the birth of the new quality involves the destruction of an earlier quality (**c**): see also Peter of Spain (pseudo), *Expositio libri De anima*, II.5 (166–167). Following Aristotle's remarks in *De anima* III.2, some commentators taught that when a perceptible form actualizes a passive sensory power, its possibility of being perceived is actualized at the same time as the power is actualized. This actualization of the potential perceptibility takes place in the perceiver and not in the object which is potentially perceptible (**d**);

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see also Thomas Aquinas, *Sententia libri De anima* II.26 (179–180); Peter of Spain (pseudo), *Expositio libri De anima* II.14 (266–267). Many authors remarked that even though perceptions are acts of externally actualized passive powers, as activities they can be regarded as discriminations of forms and in this sense active; see, e.g., Anonymous, *Sententia super II and III De anima*, ed. Bazán, II.11 (126); Anonymous, *Lectura in librum De anima*, ed. Gauthier, II.10, 277; Albert the Great, *De anima* II.4.2 (150.60–151.7).

4 Spiritual Change and the Species in the Medium

a. What he said about vision, namely, that the intermediate nature which serves vision is not air as air or water as water but a common nature, is to be understood here, too ... In the same way as colour has a twofold being, i.e., being in a coloured body which is corporeal being and being in the transparent which is spiritual being, smell too has a twofold being, namely, being in the odorous body and being in the medium. The former is corporeal being and the latter spiritual being; the former is natural and the latter extraneous being ... Nevertheless, it seems that the being of colour is more spiritual than the being of smell, for winds are seen to carry smells, and for this reason smell was assumed to be a body. But smell is like sound in this regard. Sound comes into being from a passion in air, but it is also impeded by winds. Yet it does not follow from this that it be a body. (Averroes, *Commentarium magnum in Aristotelis De anima libros* II.97 (276–278))

b. The forms are in the medium in a way which is between spiritual and material being, for the forms outside the mind have a purely corporeal being, and the forms in the soul have a purely spiritual being, and the forms in the medium have a being between material and spiritual being. (Averroes, *Compendium libri Aristotelis De Sensu et sensato* (31–32))

c. That which receives that power which is an intention separated from matter is that which primarily senses. When this has received that, they are made the same, though they differ in number. (Averroes, *Commentarium magnum in Aristotelis De anima libros* II.122 (318))

d. Now, the change is of two kinds, one natural and the other spiritual. A natural change takes place when the form of the cause of change is received in the thing changed according to its natural being, as heat is received in the thing heated. A spiritual change takes place when the form of the cause of change is received in the thing changed according to its spiritual being, as the form of colour is received into the pupil which does not thereby become coloured. For the operation of the senses,

a spiritual change is required whereby the intention of the sensible form is produced in the sense organ. Otherwise, if a natural change alone sufficed for perception, all natural bodies would perceive when they undergo alteration. But in some senses there is a spiritual change only, as in sight, while in others there is not only a spiritual but also a natural change, either on the part of the object only or likewise on the part of the organ. (Thomas Aquinas, *Summa theologiae* I.78.3)

e. When vultures sense the smell of a carcass at a distance of fifty miles or more, it is impossible for any corporeal evaporation from the carcass to be diffused over so great a space, especially since a sensible object alters the medium for the same distance in all directions, unless hindered. But even if the whole carcass were to dissolve into an odorous evaporation, this would not be enough to occupy so much space, for there is a definite limit of rarefaction for a natural body, namely the rarity of fire, and especially, the carcass does not appear to be sensibly altered by this kind of smell. Therefore, we should say that while a smoky evaporation may come from an odorous thing, it does not reach as far as where the smell is perceived; rather beyond the point reached by this evaporation the medium is altered spiritually. Such spiritual alteration is produced by the object of vision more than by that of the other senses because visible qualities are in perishable bodies in virtue of what they have in common with imperishable bodies; therefore they exist in a more formal and noble manner than do the other sensible qualities, which are proper to perishable bodies. (Thomas Aquinas, *Sentencia libri De anima* II.20, 64–88 (152–153))

A non-perceivable change of the medium is required for bringing the sensible form to an activating contact with the sense organ and the sensory faculty (**d**). The most influential model for this procedure is offered by Averroes's theory of the spiritual transmission of the sensible form. Averroes calls the transmitted forms 'intentions' (ma'nā) because they involve the sensible aspect of the object form. He taught that sensible forms have a material being in sensible objects, a more spiritual being in the medium and merely spiritual being in the soul. Like in Aristotle, the perceptibility of an object is actualized in the sensory act, although these differ in number (**a–c**). See also **3d** above.

Many authors interpreted the idea of the modes of spiritual being as referring to the various degrees of the form's being freed from matter and corporeity; see *De potentiis animae et obiectis*, ed. Callus (152.11–20); Anonymous, *Sententia super II and III De anima*, ed. Bazán, II.12 (142); II.20 (252); Anonymous, *Lectura in librum De anima*, ed. Gauthier, II.26 (402, 404); Peter of Spain (pseudo), *Expositio libri De anima* II.7 (184); II.8 (197–9); II.10 (220); II.11 (238–240); II.12 (249–250); *Quaestiones in Aristotelis De Anima*, ed. Steenberghen, II.37 (278–280); II.42 (292). Thirteenth-century commentators on Aristotle mostly assumed that the visible forms in the medium somehow retained their corporeal nature, as Albert the Great described

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Averroes's view (*De homine* 21.5 (207a)). However, Albert himself and Thomas Aquinas strictly separate the spiritual mode of being from the natural one and from perceivable natural effects (**d**); see also Albert the Great, *De anima* II.3.6 (107.56–82); Thomas Aquinas, *Sentencia libri de anima* I.10 (50); II.14 (128); II.24 (169). In Aquinas's *Quaestio disputata de anima* 13, the terms 'material' and 'immaterial' correspond to the distinction between 'natural' and 'spiritual' in (**d**). The spiritual change of the medium and the sense organ caused by visible objects is different from that associated with other objects because the latter ones, as distinct from visibility, are accompanied by various physical changes of the medium, such as vibration of the air (hearing), evaporations (smell), changes of the liquid (taste) and physical changes of the flesh (touch). While the organs of sight, hearing, and smell are not naturally changed in sensing, the organ of touch and taste is also naturally changed (*Quaestio disputata de anima* 13; *Summa theologiae* I.78.3; section **9** below). In discussing an example from Averroes's commentary on *De anima* II.97 (277–278), Aquinas argues that the merely spiritual change of the medium by the visible forms shows that lower corporeal things are to some extent endowed with a power of non-corporeal causation of heavenly bodies, for example, the illumination of the air by the sun (**e**). Elsewhere he suggests that they may have some powers similar to those of separate substances (angels); see *Quaestio disputata de potentia* 5.8; cf. Peter of Spain (pseudo), *Expositio libri De anima* II.7 (180); II.11 (238–240); II.12 (278–279). Albert the Great does not draw a distinction between the spiritual and intentional existence (*De anima* II.3.8 (110)); later it was more common to speak about the spiritual existence of which there continued to be various opinions. See, e.g., Buridan (?), *In Aristotelis De anima quaestiones*, ed. Patat, II.18; for Averroes, see Ivry 2008a; for Albert, see Dewan 1980; Steneck 1980; for Aquinas, Tellkamp 1999, 81–129. For medieval criticism of the species theory, see section **8** below.

5 Optics and Vision

a. About the multiplication of this species, one should understand that it is located in the same place as the species of the seen thing, namely between the vision and the seen thing. It takes place as a pyramid, the vertex of which is in the eye and the base of which is on the seen thing ... although the species of the eye has the form of a pyramid, the vertex of which is in the eye and the base of which is on all parts of the seen thing, from the surface of the glacial humour proceed still an infinite

number of pyramids. They all have a common base, and their vertices are on the singular points of the seen thing, so that all parts of the visible object are to be seen as powerfully as possible. However, one pyramid is the principal one, namely, that whose axis is the line passing through the centre of all parts of the eye, which is the axis of the whole eye, since that line certifies everything. (Roger Bacon, *Perspectiva* I.7.4 (106))

b. A species is not a body and it is not moved as a whole from one place to another, but that which comes to be in the first part of the air is not separated from the air, since the form cannot be separated from the matter in which it is except in the case of the soul. Instead, it produces its likeness in the second part of the air, and so on. Therefore, there is no local motion, but a generation which is multiplied in the different parts of the medium. And it is not a body which is generated there; it is a corporeal form which does not have dimensions of itself but comes to be under the dimensions of the air; and it does not come to be by flowing out of the from luminous body but by eliciting out of the potentiality of the matter of the air. (Roger Bacon, *Perspectiva* I.9.4 (140))

Roger Bacon attempts to combine the Averroistic view of the species in the medium and Alhazen's theory of vision and perspective (**a**). (See Tachau 1988, 3–39, particularly 22–23.) Bacon explains that the multiplication of the species, as the spiritual medium change was often called, takes place on a corporal substrate (**b**). Bacon uses the geometrical model of Alhazen to explain how vision takes place in the eye. The one-to-one correspondence between points on the surface of the visual objects and those on the surface of the sensing organ, the crystalline humour, was explained by means of the rays of light which originate in the object and encounter the cornea and the anterior surface of the crystalline humour perpendicularly. These non-refracting rays were thought to be stronger than oblique rays and capable of forming a stronger image in the crystalline lens (see Alhazen, *De aspectibus* I.5). Bacon even attempts to show that the oblique rays refract in a manner that all the rays emitted from one point convene in one point of the crystalline lens and in this way contribute to the formation of an image (Bacon, *Perspectiva* I.6.2). On requirements for veridical seeing, see Alhazen, *De aspectibus* I.7.36–42; Bacon, *Perspectiva* I.8.1–3; I.9.1–4; II.2.1–4. See Lindberg 1996.

6 Augustinian Active Sense

a. Two motions come together as if from opposite parts in sensing. One motion proceeds from a sensible thing which causes an alteration, and through the medium this enters to the sense organ and its innermost part where it is united with the sensory soul. The other motion proceeds from the sensory soul to meet the affect which is

produced in the sense organ. In the meeting of these motions, an image of a sensible thing is formed in the sensory soul by the action of the sensory soul which attends to its sense organ, and by means of this image a thing is sensed. (Robert Kilwardby, *De spiritu fantastico* 112)

b. You will have some kind of simile for understanding this if you assume that there is a seal in front of wax so that it touches it and that the wax has a life by which it turns itself towards the seal, and by pressing itself against it, makes itself like it; by turning its vision upon itself it then sees in itself an image of the seal. In this way the sensory spirit, by turning itself more attentively to its organ, which is informed by a sensible species, makes itself like this, and by turning its own vision upon itself it sees oneself as such. In this way it senses an external sensible object by means of the image which it has formed in itself.

The image in the organ or the organ informed by the image is the cause without which the image does not come to be in the sensory spirit. However, it is not its efficient cause, for the action of the sensible thing or of its image does not ascend beyond the limits of corporeal nature; having reached the innermost part of the organ it stays there. But when the sensory spirit, which presides over the organ, is directed towards its affects and flows more attentively into the organ which is thus affected, it goes through it everywhere, co-mingles with the spiritual image, and makes itself similar to it. (Robert Kilwardby, *De spiritu fantastico* 103)

Regarding Augustine as ‘much more sublimely illuminated than Aristotle, particularly in spiritual matters’ (*De spiritu fantastico* 98), Robert Kilwardby tries to combine the Aristotelian passive view (see **3** above) and Augustine’s active view of perception by associating the former with the physiological processes and the latter with the immaterial soul’s forming exact likenesses of external objects on the basis of its attention to the body. Sensible things are perceived through these likenesses which are not externally caused (**a–b**). Kilwardby is more explicit than Augustine in arguing that the content of perception is the image formed by the soul (cf. Silva 2012, 131–176; for Augustine, see pp. 51–54 above.) For the active sense, see also **7** below. The anonymous twelfth-century author of the *Liber de spiritu et anima* writes: ‘There certainly is some kind of spiritual nature in us where the likenesses of corporeal things are formed and held when formed, either when we are in contact with present things by one of the bodily senses and the likeness of these is continuously formed in the spirit and stored in the memory or when we think about known or unknown absent things to form some kind of spiritual understanding ... These images in the spirit are not formed by the bodies seen, nor do they have power to form anything spiritual. Instead they are formed with admirable speed by the spirit in itself, as an intellectual and rational spirit’ (23, 24, PL 40, 796, 798; cf. Augustine, *De genesi ad litteram*

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XII.16 (402.10–15). An awareness of the likenesses in the soul was called imagination – perception was this activity with the addition that it involved an awareness of the actuality of the object (*Liber de spiritu et anima* 11, PL 40, 786). For the Augustinian terms referring to the activity of the soul in perception (*attentio, intentio*), see William of Saint Thierry, *De natura corporis et animae* I.109; *Liber de spiritu et anima* 24, PL 40, 797; Robert Kilwardby, *De spiritu fantastico* 102–103, 111–112, 123. The Augustinian tradition influenced Peter John Olivi who developed an intentionalist theory of perception without inner representations (Silva and Toivanen 2010); see also **10** below.

7 Averroist Agent Sense and Other Theories of Passive and Active Aspects

a. And one might say that the sensible objects do not move the senses in the way in which they exist outside the soul, for they move the senses inasmuch as they are intentions, but in matter they are not actually, but only potentially intentions. And one cannot say that this variety results from the variety of subjects so that these become intentions because of the spiritual matter which is the sense and not because of an external mover, for it is better to hold that the variety of forms is the cause of the variety of matter, and not to hold that the variety of matter is the cause of the variety of forms. Accordingly, it is necessary to postulate an external mover in the senses, other than the sensible object, just as it was necessary in the intellect. We have seen, therefore, that if we grant that the variety of forms is the cause of the variety of matter, it is necessary that there be an external mover. Aristotle did not speak about this with respect to the sense because it is obscure, whereas it is obvious with respect to the intellect. You should think about this because it requires examination. (Averroes, *Commentarium magnum in Aristotelis De anima libros* II.60 (221))

b. Similarly, we do not say that the sensory potency which receives a sensation is in itself primarily and directly affected by the sensible object itself, although its becoming actual presupposes the actualization of a certain potency which is in itself passive or capable of being affected by the sensible object, and when this potency is actualized by the activity of the sensible object, in the same instant of time the agent sense causes sensation in the passive sense which is disposed in a certain way by the species. And in this way, we interpret all authorities who state that the sensible object moves the sense from potency to act: not that the sensible object or its species caused by the object efficiently causes sensation or directly and per se acts on the sensory potency, but because it produces its species in the sense organ which is the disposition of the passive sense for receiving sensation. (John of Jandun, *Sophisma de sensu agente*, ed. Pattin (140–141))

c. Therefore I accept the agent sense which, I believe, actively forms sensation in itself ... While the soul is the principal formative cause of perception below God, it is not sufficiently actual for this without the sensory species – however, the composition of the soul and the sensory species is already sufficiently actual for this, as is said in the third book about the intellect and its act. For when having the first act with proper dispositions it can bring itself to the second act, provided that there is no hindrance. (John Buridan, *Quaestiones in De anima* II.10 (156, 158–159))

d. However, no sensation takes place by an external sense alone; rather the soul or its internal faculty is always more fundamental. Therefore colour, sound, local motion, heat, or any other sensible thing is not perceived unless the internal faculty actually pays attention and considers it. Therefore you see that neither heat nor other similar things [are perceived] in a trance or when the mind or the internal faculty suffers from illness, as is seen in lethargy. I repeat this often because it is of basic importance. (Nicole Oresme, *De causis mirabilium* 3.3, 109–114)

e. That which produces is always nobler than that which receives ... The power of the soul necessarily and per se presupposes something nobler than what the sensible species presupposes in its subject, for while the power of the soul presupposes the soul as its subject, as everybody agrees, the sensible species necessarily and in itself presuppose neither the soul nor anything nobler than the soul nor as noble as it. (John of Jandun, *Sophisma de sensu agente*, ed. Pattin (130–131))

Averroes seems to say that there should be an active power which transforms the species in the medium into non-corporeal activators of the sensory powers (a). Giles of Rome argued that spiritual species are brought about by the influence of higher spheres; hence there is an active power associated with sensory acts, other than the sensible objects, but it is not an active sense (*Quodlibet* II.12, ed. in Pattin 1988, 5–7); a similar argument was put forward by Peter of Auvergne (ed. in Pattin 1988, 9–15); see also Peter of Spain, *Scientia libri De anima* VI.9 (232). For a critical discussion of Averroes's view and other arguments for the activity of senses, see Albert the Great, *De anima* II.3.6 (104–107). Averroes's idea was also criticized in the anonymous *Lectura in librum De anima*, ed. Gauthier, II.10 (279), and the activity of senses in general in Aquinas, *Sentencia libri De anima* II.27 (186.226–228); for other critics, see Pattin 1988, 7–8. Many later thinkers explained that while the reception of the form in the organ is merely passive, this is necessary but not sufficient for activating the non-material sensory power – its activation takes place by the activity of the soul, as John Duns Scotus explains in his *Quaestiones in De anima*, 12 (106). This view was associated with Averroes's remark about agent sense by John of Jandun (b) in a controversy with Bartholomew of Bruges who argues that Aristotle and Averroes regard

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senses as passive. The texts are edited in Pattin 1988. Buridan and his followers accepted some versions of the active sense (c). Like Buridan, many writers maintained that the presence of the sensible species transforms a sensory faculty into a higher level of actuality, after which the faculty may proceed to a second act, the actual sensation. The theory of the degrees of potentiality and actuality, also mentioned by Scotus, derives from Aristotle (e.g., *De anima* II.5); Aristotle does not apply this to the activity of the sense in the way Buridan and many others do. The activity of the soul in perception could be characterised by using traditional Augustinian terms (intention or attention), as in Nicole Oresme (d); see also his *Quaestiones in De anima* II.8–9. In his defence of the activity of the sense John of Jandun argues that since corporeal species is less valuable than animated things, it is not possible that a sense-power is activated by the causal influence of the species (e). It was a widely accepted Augustinian idea that the body cannot affect the soul; see, for example, Robert Kilwardby, *De spiritu fantastico* 52. See also p. 53 above.

8 Medieval Criticism of the Species Theory

a. There is no necessity to postulate species in the medium which would be of a different nature than the objects which produce them. This is so because these species could not be perceived by any sense, and therefore should not be postulated except on the basis of reasons deduced from principles known in themselves or from experience. If there were a reason for this, it would seem to be that the mover and the moved are simultaneous by contact, for this is the reason by which the Commentator argues for the species. But we have shown above that a thing can cause a change at a distance without changing the medium. (William of Ockham, *Quaestiones in librum tertium Sententiarum* 2 (OTh 6, 59–60))

b. The object of intuitive cognition, whether sensory or intellectual cognition, is not constituted by a being which would be something between the object and the act of cognition. I maintain that the object itself is immediately seen or apprehended without anything between it and the act. (William of Ockham, *Scriptum in librum primum Sententiarum* 27.3 (OTh 4, 241))

c. Moreover, a species would never actually represent the object to the power itself unless the power saw it by directing and fixing its vision on it. But the thing toward which the vision of the faculty is directed has the nature of an object, and the thing toward which it is first directed has the nature of the first object. Therefore, these species would have the nature of an object rather than that of an intermediate or representative principle ... so we would always know the species before the real object itself. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 58 (II, 469))

d. Note that some people are hardly willing to perceive any action except local motion, like push and pull and so on, or the action of the primary qualities, for they do not want to imagine how the sensible thing alters the medium and the medium the organ and how the cognitive power then perceives and as it were touches the sensible thing and becomes one with it, as Aristotle explains in *De anima*, Book 2, and in *De sensu* etc. Therefore, just as a spider who is sitting in the corner of the web instantly perceives many things by a thread or threads, etc., so also the soul, which is located in the heart according to Aristotle ... knows and perceives different objects by different organs, some of these more spiritually and others less so. (Nicole Oresme, *De causis mirabilium* 3.3, 97–106)

Ockham argues that the species are associated with various problems and are not needed for causing the actualization of sensory powers because this could be as well explained by action at a distance (**a**). He also argues that the postulation of the species in the medium implies that one perceives these species rather than the objects themselves, thus undermining direct sensory realism (**b**). This criticism was put forward earlier by Peter John Olivi (**c**). Olivi and Ockham refer to a representationalist theory which deviates from the way in which the species theory was usually understood. See Tachau 1988, 39–54; Pasnau 1997, 168–181. Later medieval authors did not find Ockham's position convincing and defended the theory of the spirits; John Buridan, *Quaestiones in De anima* II.16–18; Nicole Oresme, *Quaestiones in De anima* II.18; Peter of Ailly, *Tractatus de anima* 9, ed. Pluta, 45–51; Bartholomaeus Arnoldi of Usingen, *Parvulus philosophiae naturalis* (Leipzig 1499), 95r–96r; Jodocus Trutfetter, *Summa in totam physicen* (Erfurt 1514), Z6v–Aar; Aa2rv. Oresme criticizes a theory which assumes that sensations presuppose only corporeal changes (**d**); the primary qualities mentioned in the quotation are those of touch (3.3.4, 49). Oresme may refer to the atomist ideas of perception discussed by Nicholas of Autrecourt. See Grellard 2009.

9 Taste and Touch

a. We perceive tangible qualities which exceed the mean state between contrary tangibles in which this sense properly consists ... For in the case of vision, the organ is in potency to black and white, being free from the whole genus of black and white, for it is colourless. But the organ cannot be free from the whole genus of hot and cold, or wet and dry because it is composed of elements having these as qualities. Rather, the organ of touch is in potency to its objects insofar as it is a mean between contraries because the mean is in potency to the extremes. (Thomas Aquinas, *Sentencia libri De anima* II.23 (167))

b. In the genus of tangible qualities, there are several primary per se contraries which are all reduced to one subject in a way, but in another way they are not ... if we are speaking of the subject as the genus, it is clear that there is no one same subject for all tangible qualities. But speaking of the subject as the substance, there is one subject for all these, namely the body which pertains to the constitution of an animal ... Hence, formally and conceptually speaking, the sense of touch is not one but many, but it is one according to the subject. (Thomas Aquinas, *Sentencia libri De anima* II.22 (161))

c. The varieties of flavour are especially clear to us because a human being has a more exact sense of taste than other animals, taste being a kind of touch, and a human being has the most exact sense of touch among animals (Thomas Aquinas, *Sentencia libri De anima* II.19 (148–149)).

d. Touch apprehends many things that differ in kind as much as the objects of various senses, such as heavy and light, hot and cold, moist and dry, hard and soft, dense and fine, and also manifold dispositions and indispositions of the organ itself and of the whole body; for we seem to sense by touch catarrhal indigestions, swellings, and suppurations, feverish heats, the inanity and the needs of the body, as well as its fullness in satiety and, further, the various itches of the flesh, the agile mobility or the opposite tardiness of the members, their enduring strength or flimsy weakness, their wounds or integrity, and the pains and pleasures which they cause. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 61 (II, 574))

Aristotle makes the flesh the medium of touch and taste, and he argues that the organs of these are internal. Aquinas says that the organ of touch pervades the whole body (*Sentencia libri De anima* II.19 (149)), but he also argues that the flesh is the medium and, referring to *De sensu* 439a1–2, that the ultimate organ of touch is close to the heart (*In De sensu et sensato* 5, 74–76). While the distinction between the organ and the medium remains somewhat unclear, Aquinas states that the organ of touch registers tangible deviations from the mean between tangible contraries, which is found in the organ or medium of touch (**a**). Following Avicenna (*Liber de anima* I.5.77–78 (ed. van Riet, 84–85); II.3.3–4 (ed. van Riet, 138)) or Averroes (*Commentarium magnum in Aristotelis De anima libros* II.108, 116 (298, 312)), many authors referred to the nerves as the organ of touch. (See, for example, Albert the Great, *De anima* II.3.31–34 (142–147); *Quaestiones in Aristotelis De anima*, ed. Bazán, II.21 (450–451); John Duns Scotus, *Quaestiones super De anima* 2 (14–17)). In Aristotle's *De anima* II.11, the proper objects of touch are wet and dry, hot and cold, and hard and soft. Avicenna adds the pair of rough and smooth and argues that perceiving these contraries could be regarded as the task of four senses which have a joint organ (see **1** above). The question of whether touch is a single sense was popular throughout the middle ages. Aquinas sees unity

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in the fact that the objects are the qualities of the elements which constitute the animal body (**b**). Following Aristotle, Aquinas believes that the human sense of touch is the most exact among animals. This is a sign of the general sensitivity and well-balanced physical constitution of human beings – both features are regarded as purposeful for intelligent animals. Many animals see, hear, and smell better than humans, but this does not imply that their sensitivity as a whole is finer (*Sentencia libri De anima* II.19 (149)). Taste is more related to touch than other senses. Consequently it is also more acute in humans than in other animals (**c**). Peter John Olivi wanted to enlarge the scope of touch by referring to various inner states of the body in the opening of a chapter on touch (**d**). See Yrjönsuuri 2008a.

10 Intention and the Objective Being of Sensory Content

a. However much the cognitive power is informed by a habit and a species, which differ from the cognitive act, it cannot proceed to a cognitive act if it does not first actually tend toward the object, so that the gaze of its intention is actually turned and directed to the object. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 72 (III, 9))

b. A cognitive act and aspect is directed to the object, and absorbs the object into itself in an intentional way. Therefore a cognitive act is called both the apprehension of an object, and the apprehensive extension to an object. In this extension and absorption, the act is intimately conformed and configured to the object. The object presents itself or shows itself as present to the cognitive aspect, and there is a kind of representation of it by the act which is configured to it. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 72 (III, 35–36))

c. For the cognitive power must not only receive the species of the object, but also tend through its act toward the object. This second is more essential to the power since the first is required because of the imperfection of the power. And the object is the object because the power tends to it rather than because it impresses a species. (John Duns Scotus, *Quaestiones super libros Metaphysicorum Aristotelis* VII.14, n. 29)

d. The second experience is the rapid circular motion of a stick in the air, for such a moving stick seems to create a circle in the air. It is therefore asked, what is this circle which appears to the observer. Either it is really in the stick, but this cannot be the case, since the stick is straight, or it is something in the air, but this is even more unlikely, for a coloured and definite circle cannot exist in the air. It also cannot be the sight, because then the sight itself would be seen, and furthermore the

sight is not in the air where this circle appears to be. It also cannot be anywhere inside the eye, for the same reasons. Therefore, it remains that it is in the air, having an intentional or apparent being when it is judged and seen. (Peter Auriol, *Scriptum Super Primum Sententiarum* 3.14 (696–697))

e. If two people see or understand the same thing and one of these has a more clear vision or understanding, they do not see the same about the thing; one sees a more bright whiteness where the other sees a dim whiteness, even though the whitenesses are one whiteness in subjective being. That which they try to see when attending to the object is numerically one in subject, though it comes to them according to a different objective being. (Nicholas of Autrecourt, *Exigit ordo* 262.4–11)

The species theory which was meant to explain the actualization of the potency was not helpful with respect to the intentionality of sensory experience, as was stressed by Peter John Olivi and Duns Scotus. Olivi applies the Augustinian terminology in his theory that the soul is capable of attending directly to external objects without mediating species (**a–b**; see Perler 2002, 108–146; Silva and Toivanen 2010). Scotus tried to combine the causal approach with his conception of the active perception (**7** above) and phenomenological intentionality (**c**). Particularly influential in early modern times also was Scotus's idea that the cognised things have an objective or intentional being when they are represented in the cognitive faculty; see p. 278 below. Peter Auriol taught that the objective being and real being overlapped except in the exceptional cases of misperceptions and illusions (**d**). While this distinction was not meant to imply a systematic gap between appearance and reality, it led to discussions of perceptual scepticism. Nicholas of Autrecourt seems to represent a phenomenalist theory which separated the objective being in perception and real subjective being in things (**e**). See also Grellard 2005.

Chapter 6

Early Modern Theories

Tuomo Aho

Many sixteenth-century accounts of perception were based on an Aristotelian approach supplemented with the medieval species theories (see pp. 68–76 above), though Augustinian and other neo-Platonic views also survived. According to the Aristotelians, a species originated in the perceived object and was transmitted through the medium to the sensory organ. Major problems of this model pertained to the nature of the species in the medium and the processing of the species after it reaches the perceiving subject. Following some late medieval developments, many writers attempted to combine Aristotle's thought with various assumptions about the activity of the soul. As for the particular senses, most detailed arguments were always about the sense of sight (1). An elaborate challenge to the old theories came from the Renaissance naturalists, such as Telesio and Campanella. They associated their conviction of an essentially active nature of perception with their doctrine of a material spirit and rejected the elements of the species theory (2).

All these approaches contrasted with the emerging mechanical view of nature. Its adherents usually argued that the sensory process, in so far as it is outside the soul, takes place by means of purely physical and mechanical causality, within material nature and without any spiritual species or active spirit. In this way sensation became the outcome of a corporeal and mechanical event. Two influential strategies with which such mechanization was carried out were Gassendi's Epicureanism and Descartes's particle mechanics. Gradually the latter gained dominance as more consonant with the developing physics.

According to the Cartesians, perception belongs to the soul alone, whereas the sensory process is nothing but a regular effect conveyed from the object to the sensory organ and nervous system, according to the laws of nature. However, it

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proved to be difficult to give any good exposition of the details of a sensory act in terms of the modern physics. Descartes's own models were still little more than schematic and elementary allusions. Even his followers did not manage to present accurate regularities, though the whole Cartesian development appealed to scientific achievements, especially in optics. Remarkably, the mechanical explanation implied that only the end effect of the physical influence chain is relevant for the act of perception, and hence there is in principle no guarantee that the sensory experience is really produced by external objects and not by some intervening nervous events. This made the reliability of perception essentially more problematic than ever before (3). When it was said that only souls can perceive, the question concerning animal perception became acute and controversial. The strictest Cartesians denied that animals could perceive at all. However, most philosophers did not believe this, and many regarded the opinion as absurd (4).

The new conception of sensation also required a general reinterpretation of sensible qualities. According to both the Cartesians and the empiricists, sense perception cannot be as natural a portrayal of reality as was formerly assumed. Even if the sensory event and experience are caused by the physical object, they contain nothing of its actual nature or properties. Therefore the sensory features that we perceive are in fact dependent on us. It then had to be explained why exactly those features appear, either physicalistically, as Hobbes did, or by referring to providential considerations. Some philosophers were also interested in the concrete physics and physiology of sensation; however, they did not advance very far, because the biological facts on which to base such effort were scanty, and results from natural science were mostly restricted to vision (5).

In the new approach it could not be accepted as self-evident that perception is trustworthy; instead, this became a central problem. Nevertheless, philosophers initially took for granted that at least *some* basic features of sensory perception must correspond to features which are really present in the perceived objects. These are the so-called primary qualities of sensation, and of the object as well. A secondary quality, by contrast, is present in the perceiver; it can possibly be said to be in the object only if it is identified with the cause of the perceived quality. Secondary qualities are also more liable to variation than the primary ones. This doctrine of primary and secondary qualities was introduced before Locke, but it received its classic formulation from him. It met a crisis with the criticism of Berkeley, who argued that there was no ground for separating the primary qualities from others into a special class. This change promoted the course towards epistemological idealism (6).

If sensation is produced by a mechanical influence, how can perception occur in the mind? Descartes had a notoriously problematic answer in his theory of mind-body interaction. Another possibility was a metaphysically determined harmony between ideas and their sources. But among more psychologically oriented writers, the prevalent answer was that the mind works with representations of the objects which are perceived with the senses. When Locke offered his formulation of this view, he did not emphasise representationalism, that is, the idea that the really perceived objects are internal representations rather than external things; in

fact he gave no definite explanation of the connection between objects and mental representations. Later representationalism soon received a strong form in the ‘veil of perception’, which locates the representations exclusively within the mind. With Hume as its classic exponent, this theory came to have a far-reaching epistemological influence via British empiricism to Kant and forward, and led to the celebrated discussions of ‘the problem of our knowledge of the external world’ (7). Connected to these issues, sense perception was considered mainly from the standpoint of epistemology (justification, scepticism, etc.) and not so much as an issue of the philosophy of mind.

There was relatively little discussion about the sense experience as such, that is, about the phenomenology of perception. One example is in the so-called ‘direct realism’ of Thomas Reid, an early counter-attack which rejected the representationalist problems and claimed that the perceptual qualities are really nowhere but in the objects. Descriptive observations can also be found in some French sensationalists, who emphasised the primordial nature of sensory experience (8).

An interesting issue concerns the interplay of various mental powers in perception. Some philosophers thought that all organisation of sensations is done by the intellect, whereas others explored the coordination and relation of different senses at the sensory level. A famous example, the ‘Molyneux problem’, concerned the possibility of identifying objects perceived by vision with objects first perceived by touch. Moreover, one could ask if one sense is somehow the most fundamental for all perception; for instance, Berkeley concluded, like Aristotle, that the sense of touch must be such a sense. In the eighteenth century, doubts began to arise about the earlier empiricist way of viewing perceptions as isolated sensory events: a perception can be a joint result of several senses and it can depend on earlier sensations, and possibly on various non-sensory mental pre-conditions as well (9).

1 Traditional Views

a. Master: The sensible species is a quality of the third kind: It is a picture or image of what is sensed, a thing that can also be called the intention, not because the sense tends to it as an object but because it is the means by which the sense formally tends to the object of which it is a proper image or similitude. Because of its materiality, the sensible object cannot be received by the sense in its essence, but it produces its image which the sense can receive and by which it can be perceived. ...

Student: I see. But if the sensible species as a quality is an accident, I still do not understand how it comes from the object to the sense. For I have often heard from you that it is impossible for an accident to leave its subject and travel to something else – in a natural way, of course, for it is sure that God can separate absolute accidents from their subjects and conserve them, as we believe about the mystery of the sacrament of the altar.

Master: You make a strong argument against me, but yet your imagination is erroneous. You think that one and the same species travels from the object through the medium to the sense like a ship sails from one shore to another.

Student: Do you have a different opinion?

Master: Completely! The object either continuously multiplies a species after a species, all the way to the sense, or it instantaneously causes the whole species in the whole intervening medium between itself and the sense, if it is sufficiently powerful. Thus the medium is necessary for sensation, since the species are multiplied there. (Gregor Reisch, *Margarita philosophica* X.2.2)

b. There is no agent sense because the sensory forms outside the soul are the immediate and per se efficient causes of sensation; they function as instruments of the first mover, whatever it is, and the receptive cause is the passive sense. (Nifo, *De sensu agente*, f. 128va)

c. If I am not wrong, it seems that in the act of understanding, the soul is only passive and does not do anything ... since, once the soul receives the species, the representation of the object occurs immediately ... The species as an image is not one, as the thing which is distributed is not one, but it is one in itself and as a quality, though it is able to have plural modes. (Fracastoro, *Turrius*, f. 166c–d, 168d)

d. Thus, when the eye has received a species of colour, the efficient cause of the species is external material colour. But it springs from the very nature of the soul that it absorbs the species into its substance, and the soul becomes spiritually the colour which it is said to perceive. In this way, the soul is the efficient cause by emanation for the sensation, and this operation emanates from the soul. ... From all this we conclude that there are the following three notable things in sensation. They are called instants by the Latin authors, ordered and separated naturally if not temporally. Thus, there is first the reception of the species in an organ, for example that of a colour in the eye, which is caused by the action of the material object. Second, the soul makes a judgement, and hence it is said to act. Third, the judgement is received by the whole composite, the animated organism, and the soul as a part of this is said to undergo a change. (Zabarella, *De sensu agente*¹⁰ (774B–F))

e. There remains a doubt because of the old opinion of Plato, who says that vision does not happen by an internal reception of a quality in the eye, but by the emission of some spirits. This is what Plato holds in *Timaeus*. He is followed by Aulus Gellius, *Noctium* 5, 16, Alcinous, *De decretis Platonis*, Priscianus Lydus, *De phantasia*, Plotinus, *De visione*, and some perspectivists. The theory is interpreted in different ways ... After these opinions, the conclusion here is this: when species are received in the eye, vision is formed without any emission. This is Aristotle's opinion, which is amply proved in *De sensu* 2 and followed by all Aristotelians. (Suárez, *Commentaria una cum quaestionibus in libros Aristotelis De anima* 7.4.1–2)

In his widely-read *Margarita philosophica*, Gregor Reisch presented the elements of the Aristotelian species theory which stemmed from the thirteenth century (a). The view of perception as passive was defended by Agostino Nifo against John of Jandun's interpretation of Averroes's agent sense (b); for John of Jandun, see pp. 73–75 above. In his later *De anima* commentary, Nifo argued that perception is an active judgement, drawing on the authority of Themistius and Simplicius. (see Mahoney 1971; Spruit 2008, 215–216.) While Girolamo Fracastoro developed some new ideas of cognition, his view of the senses was in agreement with the species causation (c); cf. Leijenhorst 2007, 208–214. For the passive sense doctrine, see also Juan Luis Vives's influential *De anima et vita* 124, 160, 164.

Zabarella, in turn, combined the theory of species reception and the activity of the soul in the same way that some fourteenth-century authors did (d); see Poppi 1972, 65–77. Variants of a similar view were common in the sixteenth century, see Cajetan, *Commentaria in De anima Aristotelis* II.11, 281 (264–265), Francesco Silvestri of Ferrara, *Quaestiones in tres libros De anima* II.9 (62–63). On these Renaissance developments, see Spruit 1995, 225–258; 2008. Suárez agreed that while the sensible species causally influences the sense organ this material event cannot be the efficient cause of the sensory act of the immaterial soul. The sensory power and the organ that receives the species together constitute an instrument which the soul uses in perceiving: 'In this instrument there are two parts: one which is most perfect but does not represent the object, and another which is less noble but represents the object' (*Commentaria una cum quaestionibus in libros Aristotelis De anima* 5.4.16). Before giving an account of his own version of the species theory, Suárez first criticised various extramission theories, which did not find many adherents any more in his time (e). For a detailed Jesuit exposition of the species theory, see Roderigo Arriaga, *Cursus philosophicus, Disputationes de anima*, IV (Paris, 1639). For Suárez's non-causal theory of perception, see South 2001.

In late Aristotelianism, there were many learned debates concerning the best ways of applying the traditional theory to particular senses. Some typical issues in these discussions are: What exactly can be a subject (producer) of light, sound, etc.? What material substances can serve as mediums for each sense, and how do the various mediums differ in regard to the transmission of species? What is the organ of a sense: the sensory organ itself, the sensory nerves, the brain, or they all in different manners? Does hunger belong to the sense of touch? Is there only one sense of touch or several? Thus, John of St. Thomas (Poincot) writes: 'Touch would seem to be of various species ... Even the disciples of St. Thomas are divided. Cajetan, *De anima* II.10, Flandria, *ibid.*, and Javelli, d. 47, hold that there are many species of touch. But Bañez I q. 78 a. 3 dub. thinks that touch is of one species. It seems probable that touch is one sense, of an atomic [i.e., undivided] species' (*Cursus philosophicus thomisticus* III.5.6 (800)). Concerning the species theories, see Park 1988; Simmons 1994; Spruit 1995, 274–351; South 2001, 2002; Leijenhorst 2002, 2007; Aho 2007.

2 The Activity of the Material Soul

a. Therefore it is clear that perceptions are sensations of the powers of the things, the impulses of the air, and of the proper passions, changes and motions, particularly of these latter ones, for the spirit perceives the former ones because it perceives that it undergoes something and is changed and moved by it. And it is clear that all sensations are of this kind and come to be in this way. (Telesio, *De rerum natura iuxta propria principia* VII.2)

b. This is therefore the spirit which, taking its origin from the semen, is thus found in all things formed from semen which are white and bloodless, excepting just bones and things similar to them, and this spirit alone perceives in the animal, and sometimes moves with the whole body, sometimes with single parts of it, and governs the whole animal. Obviously it performs operations which all people regard as those most proper to the soul. (Telesio, *De rerum natura iuxta propria principia* V.1)

c. It is just as stupid to deny that things do sense as it is to say that wind does not move because it has no legs, or that fire does not devour because it has no teeth, or that people in a landscape cannot see it because there is no window through which to look, or that an eagle cannot see without spectacles. The same stupidity leads others to believe that God has a body and eyes and hands. (Campanella, *Del senso delle cose e della magia* I.13)

A crucial assumption in the views of Telesio and congenial naturalists was that there exists a particularly subtle material substance, namely, the spirit (*spiritus*), which has great natural reacting capacity and which perceives even its own changes (**a**). Spirit is present as a white and bloodless matter within the nervous system, mainly in the brain. The stimuli received in the sensory organs bring forth activities in the spirit, and that leads to a perception (**b**). The idea was carried to downright panpsychism by Campanella (**c**). See Boenke 2004; Ernst 2007; Spruit 2008. For Leibniz's tendencies towards universal perception, see Phemister 2005, ch. 6.1.

3 From Species to Mechanical Effects

a. If the species are like some images representing corporeal and extended things, how can they be incorporeal, non-extended, and without parts? How can a divisible thing be represented by an indivisible thing? And if they emanate from the objects, how do they not seize anything from them (as they are nothing by themselves and nothing is taken from the objects)? ... According to Epicurus' view, both the simulacra of colours or images of visible things and also sounds, odours, tastes and other

qualities consist of corpuscles, which have certain magnitudes, figures, positions, and motions; on the other hand, the organs of sight and hearing, taste, and other senses are structured to have small spaces or pores or entrances (also having magnitudes, figures, and positions), so that they let in the corpuscles with commensurate qualities. (Gassendi, *Physica* III.2.6 (337–338))

b. Therefore you will have reason to conclude that there is no need to suppose that anything material passes from the objects to our eyes to make us see colours and light, or even that there is something in the objects which is similar to the ideas or sensations that we have of them. In just the same way, when a blind man feels bodies, nothing needs to leave the bodies and pass along his stick to his hand, and the resistance or movement of these bodies, which is the sole cause of the sensations he has of them, is nothing similar to the ideas he forms of them. By this means, your mind will be delivered from all those little images flitting through the air, called ‘intentional species’, which so much employ the imagination of the philosophers. (Descartes, *La Dioptrique*, AT VI, 85, cf. *ibid.*, 112)

c. It has surely happened to you sometimes, while walking in the night-time over rough ground without a light, that you have needed a stick in order to conduct you. You may have noticed that you sense by means of this stick the various objects around you, and even that you can distinguish between trees, stones, sand, water, grass, mud, and other such things ... Think now of those who were born blind and have used this [device] all their lives: you find that it is so perfect and exact that one might almost say that they see with their hands, or that their stick is the organ of some sixth sense which was given them instead of sight ... Hence you need not consider it strange that this light can extend its rays in an instant from the sun to us: for you know that the action by which one end of a stick is moved must pass thus to the other end in an instant, and it would have to pass in the same way even if the distance were greater than between the earth and the heavens. (Descartes, *La Dioptrique*, AT VI, 83–84)

d. Moreover, these rays [of light] must always be imagined to be exactly straight when they pass through only one transparent body which is wholly uniform; but when they meet some other bodies, they can be deflected by them, or weakened, in the same way that the movement of a ball or a stone thrown into the air is deflected by the bodies it encounters. For it is quite easy to believe that the action or inclination to move, which light should be taken to be, as I have said, must in this respect follow the same laws as the motion. (Descartes, *La Dioptrique*, AT VI, 88–89)

e. If, for example, in a cord ABCD the ultimate part D is pulled, the first part A moves with the same movement which could have been brought about if one of the intermediate parts B or C had been pulled and the ultimate D had not moved at all. In similar fashion, when I feel a pain in my foot, physics teaches me that this sensation takes place by means of nerves distributed throughout the foot, which lead from the foot like cords up to the brain. When the nerves are pulled in the foot, they in turn pull on those inner parts of the brain to which they are attached, and excite a certain motion in them; and nature has laid it down that this motion produces in the mind a sensation of pain as existing in the foot. But since these nerves, in passing from the foot to the

brain, must pass through the calf, the thigh, the lumbar region, the back and the neck, it can happen that, even if their part in the foot is not touched, but only one of the intermediate parts, just the same motion will occur in the brain as occurs when the foot is hurt, and therefore it will necessarily come about that the mind feels the same sensation of pain. And we must suppose the same with regard to any other sensation. (Descartes, *Meditationes de prima philosophia* VI, AT VII, 87)

f. The cause of Sense, is the Externall Body, or Object, which presseth the organ proper to each Sense, either immediatly, as in the Tast and Touch; or mediately, as in Seeing, Hearing, and Smelling: which pressure, by the mediation of Nerves, and other strings, and membranes of the body, continued inwards to the Brain, and Heart, causeth there a resistance, or counter-pressure, or endeavour of the heart, to deliver it self: which endeavour because *Outward*, seemeth to be some matter without. (Hobbes, *Leviathan* I.1 (3))

Gassendi illustrates his view with long quotations from Lucretius. Gassendi's theory is the best known but not the only representative of the revival of Epicurean atomism, where sensation results from the reception of a continuous flow of material resemblances from the perceived object to a corporeal soul (a). For Gassendi and other atomist theories, see Brundell 1987, ch. 4; LoLordo 2007, ch. 3.

Descartes attacks a particularly elementary interpretation of sensible intentional forms (b), but some textbooks in the early seventeenth century had indeed come close to postulating such 'images flitting through the air'. Clearly his arguments strike at Gassendi as well. Elsewhere Descartes shows that even if a received sensory impulse, such as an optical picture in the eye, may bear some resemblance to the sensed object, this is just a law of physics and does not suffice for any similitude in the intentional meaning (see e.g. *Dioptrique*, AT VI, 114–115). 'As I have sufficiently explained already, we must not assume that it is by means of this resemblance that the picture makes us sense these objects, as if there were yet other eyes in our brain with which we could perceive it. Instead, we must suppose that it is the movements composing this picture and acting immediately upon our soul, in so far as it is united to our body, which nature has ordained to make it have such sensations' (Ibid., 130). Objects cause movements in the brain, and 'owing to that, the soul senses them' (*Les passions de l'ame* 23, AT X, 346). Concerning sensible species, see also *Meditationes*, AT VII, 249.

Scientific development gave inspiration to the new views about perception. The Renaissance had already cultivated the artistic theory of perspective (see Alberti, *De pictura*), and Descartes's examination of visual sensation was made possible by the fact that Kepler had given the first

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optically feasible account of how the eye-lens produces a sharp image on the retina in his *Ad Vitellionem paralipomena*. On optics and visual phenomena see Lindberg 1976; Wade 1998, ch. 2; on acoustics see Mancosu 2006, 596–611, Ullmann 2002.

Descartes illustrates vision by comparing it to how blind people get information by means of a stick (**c**), but he also uses a model where visual impulses proceed like balls among physical bodies (**d**). The relationship between the two models is problematic: are they compatible? The stick model interprets sensation very simply and seeks to defend the straight course and instantaneous nature of (visual) impulses; but in the ball model, the visual rays can undergo ‘change of direction or weakening’. They become like ordinary mechanical movements, and also the instantaneous effect becomes open to question. Thus the sensory effect seems to receive a more complicated physical history, which makes its reliability more problematic.

The generation of sensory experiences is mechanical in Descartes (**e**). This result is often mentioned in connection to pain, because of Descartes’s famous example of pains in an amputated arm: ‘... She would still sometimes complain that she felt various pains in the hand which had been cut off, now in one finger, now in another. This could certainly happen for no other reason than that the nerves which formerly had descended from the brain to the hand, and which were then terminated in the arm next to the elbow, were moved there in the same way as they formerly had to move in the hand so as to imprint the feeling of this or that painful finger upon the soul residing in the brain’ (*Principia philosophiae* IV.196, AT VIII A, 320). But it is clear that the same reasoning holds for all sensations, as is shown in the preceding paragraphs of the *Principia* and also stated at the end of (**e**). Concerning Descartes’s mechanical theory of perception, see Vendler 1971; de Buzon 1991; Wolf-Devine 2000; Des Chene 2001; Simmons 2003; Aucante 2006, 256–287.

Descartes opposes the species theory saying that it would imply that we need other eyes in the brain for inspecting the pictures transmitted to the brain (*Dioptrique*, AT VI, 130); Hobbes repeats the same criticism against Descartes’s idea that the immaterial soul is aware of the movements in the brain (*Tractatus opticus* II (208)). His own opinion equates perceptions with certain mechanistically explained movements of the corporeal spirits in the nerves: the motions coming from the objects are transmitted through the organs and the brain to the heart, where they cause a countermovement which proceeds to the organs, and this is responsible for the impression that there are external sensory qualities (**f**). For Hobbes’s doctrine of sense perception, see Leijenhorst 2002, 56–100. The mechanical model of sensory effects became central in later materialistic currents.

4 Do Animals Perceive?

a. Our business therefore is to shew, for what reason we exclude *Sense* from *Beasts*; and how it comes to pass, that they have *Eyes*, yet *see* not; are provided with *Ears*, yet perceive no *sounds*; are not without a *Nose*, yet *smell* not; have the use of a *Tongue*; yet *discern* nothing by any different *relish* or *Savour*; which the better to effect, we propose a thing Note-worthy; that our *Sense* is to be distinguish'd into three degrees. The first *degree* contains that *simple motion* which the *Object* impresses upon the *Nerves*, or that whereby the *Organ* of the *Body* is immediately affected by external *Objects*, which can be nothing else but the *agitation* of the *particles* of the said *Organ*, the change of *Figure* and situation proceeding from this *agitation* ... When, I say, that the *motion* of an *Object* is imprest upon a *Corporeal Organ*, I would not have it understood that the *motion*, for example, of the *Eye*, is only made there, but that it passes up to the *Brain*, from whence the *Fibres* of the *Nerves*, like *Lutestrings* in a *Lute*, are stretcht out to other *Members*. The *Second Degree* contains *Perception*; which is tied to that *motion*, whenever this impression is carried to the *Pineal Glandule*, or seat of the *Soul*. Such are the perceptions of *Pain*, *Titillation*, *Thirst*, *Hunger*, *Heat*, *Sound*, *Savour*; and the like; which, we say, arise from the *substantial Union* of the *Soul* with the *Body*. The *Third* contains all those *Judgments* which attend those *Perceptions* ...

These things thus premised, it manifestly follows, that *Animals* are void of *Sense*, properly so call'd, unless we admit for *Sense*, that *Corporeal Motion* which preceeds *Perception*, and hath reference to it, as to something begun and imperfect. For it is of *Corporeal Motion* only that *Animals* are capable ... (Le Grand, *An Entire Body of Philosophy*, Part III, I.77 and 78)

b. Next to the ridicule of denying an evident truth, is that of taking much pains to defend it; and no truth appears to me more evident, than that beasts are endow'd with thought and reason as well as men. The arguments are in this case so obvious, that they never escape the most stupid and ignorant. (Hume, *A Treatise of Human Nature* I, III.16 (176))

c. However attentively I read the work of this author [Buffon], I do not understand his idea. I see that he distinguishes between corporeal sensations and spiritual sensations, that he assigns both of them to humans, and that he confines animals to the former. But it is in vain that I reflect on what I experience in myself: I cannot make this differentiation as he does. I do not sense my body on one side and my soul on the other; I sense my soul in my body; all my sensations appear to me only as modifications of one same substance; and I do not understand what could be meant by *corporeal sensations*. (Condillac, *Traité des animaux* I, 2)

Descartes emphasises that perceiving belongs to the mind. 'I find in me faculties for certain special modes of thinking, such as the faculties of imagination and sensory perception. I can clearly and distinctly understand the whole of myself without these faculties, but I cannot, conversely, understand them

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without me, that is, without an intelligent substance in which they inhere.’ (*Meditationes* VI, AT VII, 78; cf. *ibid.*, 33, and the reference to ‘action upon our soul’, *La Dioptrique*, AT VI, 130.) These passages would suggest that animals cannot sense anything, a result contrary to the standard views. Sometimes Descartes does seem to imply this (see *Traité de l’homme*, AT XI, 130–131), but his view remains ambiguous. In his letter to Marquis of Newcastle, 23 November 1646, he allows at least some behaviourist interpretation of animal perception (AT IV, 573–576). Some Cartesians were resolute here, such as Antoine Le Grand, a French philosopher and theologian who lived in England (**a**).

For Spinoza, animal sensations were no problem: ‘Not that I deny that the lower animals have sensation’ (*Ethica* IV, prop. 37 schol. 1). On the other hand, Malebranche writes: ‘As God has created the dog especially for man, in order that man, for his part, might team up with his dog, He placed in the dog a disposition to make certain contortions and movements of the head, back, and tail, which though they are of themselves in no way related to a soul’s thoughts, naturally engender in man the thought that his dog loves and flatters him’ (*De la recherche de la vérité* V.3 (II, 151)). Cf. II.1.5 (I, 229): ‘beasts, though without a soul and incapable of any perception’.

Biologists often used the celebrated comparison between animals and machines, but they did not necessarily draw any philosophical conclusions from it. Many philosophers attacked the strong Cartesian view, and later Hume, for instance, ridiculed it (**b**). As he sees it, the matter is completely clear, not even worth real argument, and disagreement is merely an expression of philosophers’ confusion. Condillac elaborated a similar critique (**c**). He implies that no qualitative difference can be found between animal and human sensation; therefore, it is not possible to suppose that animals have only some lower sensitive capacity. Humans and animals are, in principle, in the same position. For discussion of animal psychology, see Serjeantson 2001; Edwards 2008.

5 Sensible Qualities

a. It will suffice for us to observe that the perceptions of the senses pertain only to this conjunction of a human body with a mind, and that while they usually show us how external bodies can benefit or harm this conjunction, they nevertheless do not teach us what these things are like in themselves, except occasionally and accidentally ... We shall then perceive that the nature of matter, or of body considered in general, does not consist in the fact that it is something hard, heavy, or coloured, or that it affects the senses in any other way; but only in the fact that it is a thing which is extended in length, breadth, and depth. For

as regards hardness, our sensation shows nothing about it except that the parts of hard bodies resist the motion of our hands when they encounter them. Moreover, if whenever our hands moved in a given direction, all the bodies located there would retreat at the same speed at which our hands approach, we should never feel any hardness. (Descartes, *Principia philosophiae* II.3 and 4, AT VIIIA, 41–42)

b. There is no one among us who did not judge, from the earliest age, that all the things of which he had sensations were certain things which existed outside his mind and were entirely similar to his sensations, that is, to the perceptions we had of them. Thus, upon seeing a colour, for example, we assumed that we were seeing a certain thing which was located outside us and entirely similar to the idea of the colour which we were then experiencing within us. And on account of the habit of judging in this way, it seemed to us that we were seeing it so clearly and distinctly that we held it to be certain and indubitable. (Descartes, *Principia philosophiae* I.66, AT VIIIA, 32; cf. I.70 and the French versions)

c. Because the *image* in vision consisting in *colour* and *shape* is the knowledge we have of the qualities of the object of that sense; it is no hard matter for a man to fall into this opinion, that the same *colour* and *shape* are the *very qualities themselves*; and for the same cause, that *sound* and *noise* are the *qualities of the bell*, or of the air. And this opinion hath been so long received, that the *contrary* must needs appear a great paradox; and yet the introduction of *species visible* and *intelligible* (which is necessary for the maintenance of that opinion) passing to and fro from the *object*, is *worse* than any paradox, as being a plain *impossibility*. I shall therefore endeavour to make plain these four points:

That the subject wherein colour and image are inherent, is *not* the *object* or thing seen.

That there is nothing *without us* (really) which we call an *image* or *colour*.

That the said image or colour is but an *apparition* unto us of that *motion*, agitation, or alteration, which the *object* worketh in the *brain*, or spirits, or some internal substance of the head.

That as in conception by *vision*, so also in the conceptions that arise from *other senses*, the subject of their *inherence* is not the *object*, but the *sentient*. (Hobbes, *The Elements of Law: Human Nature* II.4)

d. What is sensing a body? Let us consider the sense of sight, since that is what we know the best. It is the seeing of a body as luminous or coloured. How can we see a coloured body, since colour is not a modification in the bodies, but in our mind? By applying to the body the sensation of colour, which God gives us for the purpose that we may discern the body more easily. Which are the bodies that we sense by the sense of sight? Those to which we apply the sensations of colour or of light. (Arnauld, *Défense contre la réponse* (409))

e. Nothing can make any thing in itself: the *clapper* hath not sound in it, but *motion*, and maketh motion in the internal parts of the bell, so the *bell* hath motion,

and not sound. That imparteth *motion* to the air; and the *air* hath motion, but not sound; the *air* imparteth motion by the *ear* and *nerves* unto the *brain*; and the brain hath motion but not sound; from the *brain*, it reboundeth back into the nerves *outward*, and thence it becometh an *apparition without*, which we call *sound*. And to proceed to the *rest* of the *senses*, it is apparent enough, that the *smell* and *taste* of the *same thing*, are *not the same to every man*; and therefore are not in the thing *smelt* or *tasted*, but in the men. So likewise the *heat* we feel from the fire is manifestly in *us*, and is quite *different* from the heat which is in the *fire*: for *our* heat is *pleasure* or *pain*, according as it is *extreme* or *moderate*; but in the *coal* there is no such thing. By this the fourth and last proposition is proved, *viz.* That as in conception by vision, so also in the conceptions that arise from *other* senses, the subject of their inherence is not the object, but the sentient. (Hobbes, *The Elements of Law: Human Nature* II.9)

f. *Sensations* are those internal feelings of the mind, which arise from the impressions made by external objects upon the several parts of our bodies ... The white medullary substance of the brain is also the immediate instrument, by which ideas are presented to the mind ... External objects impressed upon the senses occasion, first in the nerves on which they are impressed, and then in the brain, vibration of the small, and as one may say, infinitesimal, medullary particles. (Hartley, *Observations on Man*, Introduction; I.1 (8); I.1 (11))

According to Descartes, the perceived qualities are not to be ascribed to real external objects because they are experienced only through the body (**a**). By his very wording, he shows that he has given up the unproblematic realism. He indicates that people are, in the first place, aware of their own perceptions, but then, by judgement, form a natural but erroneous hypothesis about ‘exactly similar’ objects (**b**).

Hobbes and Arnauld give opposite answers to the problem of how external physical things can appear to the mind. Hobbes develops strict mechanist materialism (**c**), whereas Arnauld argues that the only possible explanation of perception is the divine order of world (**d**). Arnauld’s reasoning develops some points that were made already in Descartes’s *Meditation VI* (AT VII, 83, cf. 87): ‘And although I feel heat when I go near fire, and also feel pain when I go too near to it, there is in fact no reason for the conviction that there is something in the fire which is similar to this heat or this pain. There is merely reason to suppose that there is something in the fire, whatever it may be, which produces in us the sensations of heat or pain ... The sensory perceptions are really given by nature simply to signify to the mind what is beneficial or harmful for the composite of which the mind is a part, and in this respect they are sufficiently clear and distinct.’ (see Simmons 2001.)

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Hobbes was a precursor of the tradition which wished to find philosophical applications for the results of physiological and medical investigations (e); David Hartley was a faithful later representative of this approach: sensations are supervenient on ordinary organic processes that take time and occur in various large areas in the brain (f). However, work in this direction had relatively little concrete accomplishments because the eighteenth-century methods could not discover much about the true psychophysiology of sensory processes. For a participant's thorough report of the research on vision, see *The History and Present State of Discoveries relating to Vision, Light and Colours* by Joseph Priestley (1772). During the eighteenth century, the psychology of perception could benefit from the spectral analysis of colours, the results of later Newtonian optics, and the discovery of the outlines of the mechanism of the ear, but the sensory functions of the central nervous system remained inaccessible.

It is also important to notice that the very notions of 'perceptible', 'sensible' or 'visible' gradually widened and their import became less self-evident. New instruments changed the traditional idea. Referring to Galileo, Descartes said that telescopes 'have already shown to us new stars in the heaven' (*Dioptrique*, AT VI, 81); a little later, microscopic studies, though not very systematic after Leeuwenhoek, disclosed sensibles that could be produced only by appropriate preparation and manipulation. For an overview of the development of physiology, see Bracegirdle 1977; Grmek and Bernabeo 1996. On philosophically relevant scientific achievements, see Cantor 1983, C. Wilson 1995, ch. 3.

6 Primary and Secondary Qualities

a. But first I need to say something about what we call *heat*. I very much suspect that the conception which people have generally formed of it is very far from the truth, when it is believed to be a genuine accident, affection, and quality which really inheres in the matter by which we feel warmed.

Nevertheless, I say that as soon as I conceive of something material or a corporeal substance, I indeed feel drawn by a necessity to conceive also that it is bounded and has this or that shape; that it is large or small in relation to other things; that it is in this or that place and at this or that time; that it moves or stands still; that it touches or does not touch another body; that it is one, few, or many. And I cannot separate it from these conditions by any act of imagination. But I do not feel my mind forced to think of it as necessarily accompanied by such conditions as being white or red, bitter or sweet, loud or quiet, or having a pleasant or unpleasant smell.

In fact, if we were not guided by the senses, reason and imagination would perhaps never arrive at them by themselves. Therefore I think that, as far as concerns the subject in which they seem to inhere, these tastes, smells, colours, etc., are nothing but mere names, but they have their residence only in the sensitive body ... (Galilei, *Il Saggiatore* 48 (347–348))

b. We apprehend by our senses nothing in external objects except their figures, sizes and motions ... We understand very well how the various sizes, figures and motions of the particles of one body bring about various local motions in another body. But we can in no way understand how these things (that is, size, figure and motion) can produce something else whose nature is quite different from their own, such as those substantial forms and real qualities which many suppose to be in things ... And apart from size, figure and motion, which I have explained as they are to be found in each body, nothing located outside us is observed by senses except light, colour, smell, taste, sound, and tactile qualities; and these I have now demonstrated are nothing else in the objects, or at least we apprehend them as nothing else, than certain dispositions consisting in size, shape and motion. (Descartes, *Principia philosophiae* IV.198, 199, AT VIII A, 321–323)

c. Qualities thus considered in Bodies are, First such as are utterly inseparable from the Body, in what estate soever it be; such as in all the alterations and changes it suffers, all the force can be used upon it, it constantly keeps; and such as Sense constantly finds in every particle of Matter, which has bulk enough to be perceived, and the Mind finds inseparable from every particle of Matter, though less than to make it self singly be perceived by our Senses ... These I call *original* or *primary Qualities* of Body, which I think we may observe to produce simple *Ideas* in us, viz. Solidity, Extension, Figure, Motion, or Rest, and Number.

Secondly, Such *Qualities*, which in truth are nothing in the Objects themselves, but Powers to produce various Sensations in us by their *primary Qualities*, i.e. by the Bulk, Figure, Texture, and Motion of their insensible parts, as Colours, Sounds, Tasts, etc. These I call *secondary Qualities*. (Locke, *An Essay concerning Human Understanding* II.8.9 and 10)

The *Ideas of primary Qualities* of Bodies, are *Resemblances* of them, and their Patterns do really exist in the Bodies themselves; but the *Ideas, produced* in us by these *Secondary Qualities, have no resemblance* of them at all. There is nothing like our *Ideas*, existing in the Bodies themselves. They are in the Bodies, we denominate from them, only a Power to produce those Sensations in us: And what is Sweet, Blue, or Warm in *Idea*, is but the certain Bulk, Figure, and Motion of the insensible Parts in the Bodies themselves, which we call so. (Locke, *An Essay concerning Human Understanding* II.8.15; cf. II.8.18)

d. The *Idea of Solidity* we receive by our Touch; and it arises from the resistance which we find in Body, to the entrance of any other Body into the Place it possesses, till it has left it. There is no *Idea*, which we receive more constantly from Sensation, than *Solidity* ... This of all other, seems the *Idea* most intimately connected with, and essential to Body, so as no where else to be found or imagin'd, but only in

matter ... [The Mind] considers it, as well as Figure, in the minutest Particle of Matter, that can exist; and finds it inseparably inherent in Body, where-ever, or how-ever modified. This is the *Idea* belongs to Body, whereby we conceive it *to fill space*. (Locke, *An Essay concerning Human Understanding* II.4.1–2)

e. Some there are who make a distinction betwixt *Primary* and *Secondary* qualities: By the former, they mean Extension, Figure, Motion, Rest, Solidity or Impenetrability and Number: By the latter they denote all other Sensible Qualities, as Colours, Sounds, Tastes, etc. ... But it is evident from what we have already shewn, that Extension, Figure and Motion are only Ideas existing in the Mind, and that an Idea can be like nothing but another Idea, and that consequently neither They nor their Archetypes can exist in an unperceiving Substance. ...

I desire any one to reflect and try, whether he can by any Abstraction of Thought, conceive the Extension and Motion of a Body, without all other sensible Qualities. For my own part, I see evidently that it is not in my power to frame an Idea of a Body Extended and Moving, but I must withal give it some Colour or other sensible Quality which is acknowledg'd to Exist only in the Mind. In short, Extension, Figure, and Motion, abstracted from all other Qualities, are inconceivable. Where therefore the other sensible Qualities are, there must these be also, *i.e.*, in the Mind and no where else. (Berkeley, *The Principles of Human Knowledge* 9 and 10)

Galileo's observations about the properties of physical bodies anticipate the later philosophical distinction between primary and secondary qualities (a). Similarly, Descartes admits only one essential attribute of matter, namely, its extension (see e.g. *Principia philosophiae* I.53), and therefore only spatial properties are truly perceptible (b). See De Rosa 2010 about the different suggestions for interpretation of Descartes's own position on the secondary qualities. As explicitly formulated by Robert Boyle (*The Origin of Forms and Qualities According to Corpuscular Philosophy*, Theoretical Part IV–VI), the systematic distinction between primary and secondary qualities is thereafter adopted in Isaac Newton's physics (*Opticks*, Book I Part II, on the origin of colours). It became a usual opinion among scientists that the primary qualities are objective, measurable and quantifiable, and therefore they are truly scientific, whereas secondary qualities are subjective and need not be considered in scientific theory at all. Philosophers, on the other hand, laid stress upon the same distinction especially because the primary qualities had some 'counterparts' in the objects themselves and the secondary ones did not. Thus the primary qualities ought to be also more reliably known. This was very different from Aristotle; see *De anima* III.3, 428b18–26.

According to Locke, all ideas are acquired from the senses, even the idea of a material body itself (d). Still, he thinks that the perceived qualities really belong to the perceived objects. Even secondary qualities are present in them as powers or dispositions for producing sensations that have the

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corresponding experiential qualities, though in this case these experiential qualities have no ‘resemblance’ to objects, as the primary qualities have (c). Berkeley, on the contrary, grants no status in the objects to any qualities of perception. He argues that the whole notion of resemblances between perceptual mental ideas and external objects is mistaken, and concludes that it is impossible to divide sensory qualities into fundamentally different kinds (e). Hence, the so-called primary qualities are like any others. (See M. Wilson 1999; Pappas 2000, 100–124.) Everything sensed occurs in the same way, that is, in the mind only, and is equally valid. ‘If colours, sounds, tastes, and smells be merely perceptions, nothing we can conceive is possess of a real, continu’d, and independent existence; not even motion, extension and solidity, which are the primary qualities chiefly insisted on’ (Hume, *Treatise of Human Nature* I, IV.4 (228); see also 226–231). However, Hume admits that the so-called primary qualities are in some respects more objective than the secondary ones; see Winkler 2011.

Colour properties are a case of secondary qualities that became the subject of especially lively discussion. ‘That Sensation which we call Colour ... may be look’d upon as the more proper, though not the usual acception of the word Colour ... I shall now re-mind you, that I did not deny, but that Colour might in some sense be consider’d as a Quality residing in the body that is said to be Colour’d; and indeed the greatest part of the following Experiments refer to Colour principally under that Notion, for there is in the bodies we call Colour’d, and chiefly in their Superficial parts, a certain disposition, whereby they do so trouble the Light that comes from them to our Eye, as that it there makes that distinct Impression, upon whose Account we say, that the Seen body is either White or Black, or Red or Yellow, or of any one determinate Colour’ (Boyle, *Experiments and Considerations Touching Colours* 2.3 (28) and 3.1 (33)). Similarly, Locke then explained how colour predicates have two meanings: one immediate meaning for experiences, and another dispositional meaning for objects. Instead, some others (Reid) held that colour predicates univocally concern objects, though colours are supervenient on more basic properties. Concerning the early stage of primary and secondary qualities, see Perler 1996; Anstey 2000, ch. 1 to 3. For Locke’s theory see Ayers 2011; Jacovides 1999, 2007; R. Wilson 2002; Kemmerling 2008. About Reid, see Benbaji 1999; Nichols 2007.

7 Representations

a. The real means by which God makes the soul sense what happens in the body originates from the nature of the soul, which represents the bodies and has been made in advance so that the representations which will spring up in it in a natural

progression of thoughts correspond to the change of bodies. The representation has a natural conformity to what is represented. If God made the idea of a square represent the round figure of a body, this would be an inconvenient representation, for the representation would have angles or bunches whereas the original would be quite even and uniform. When a representation is imperfect, it often excludes something from the objects, but it must not add anything; that would not make it more perfect, but false. (Leibniz, *Essais de théodicée*, §§ 355–356)

b. When we set before our Eyes a round Globe, of any uniform colour, v.g. Gold, Alabaster, or Jet, 'tis certain, that the *Idea* thereby imprinted in our Mind, is of a flat Circle variously shadow'd, with several degrees of Light and Brightness coming to our Eyes. But we having by use been accustomed to perceive, what kind of appearance convex Bodies are wont to make in us; what alterations are made in the reflections of Light, by the difference of the sensible Figures of Bodies, the Judgment presently, by an habitual custom, alters the Appearances into their Causes: So that from that, which truly is variety of shadow or colour, collecting the Figure, it makes it pass for a mark of Figure, and frames to it self the perception of a convex Figure, and an uniform Colour; when the *Idea* we receive from thence, is only a Plain variously colour'd, as is evident in Painting. (Locke, *An Essay concerning Human Understanding* II.9.8)

c. That our senses offer not their impressions as the images of something *distinct*, or *independent*, and *external*, is evident; because they convey to us nothing but a single perception, and never give us the least intimation of any thing beyond. A single perception can never produce the idea of a double existence, but by some inference either of the reason or imagination. When the mind looks farther than what immediately appears to it, its conclusions can never be put to the account of the senses; and it certainly looks farther, when from a single perception it infers a double existence, and supposes the relations of resemblance and causation betwixt them.

If our senses, therefore, suggest any idea of distinct existences, they must convey the impressions as those very existences, by a kind of fallacy and illusion. Properly speaking, 'tis not our body we perceive, when we regard our limbs and members, but certain impressions, which enter by the senses ... Even our sight informs us not of distance or outness (so to speak) immediately and without a certain reasoning and experience, as is acknowledg'd by the most rational philosophers.

As to the *independency* of our perceptions on ourselves, this can never be an object of the senses; but any opinion we form concerning it, must be deriv'd from experience and observation: And we shall see afterwards, that our conclusions from experience are far from being favourable to the doctrine of the independency of our perceptions ... Thus to resume what I have said concerning the senses; they give us no notion of continu'd existence, because they cannot operate beyond the extent, in which they really operate. They as little produce the opinion of a distinct existence, because they neither can offer it to the mind as represented, nor as original. (Hume, *A Treatise of Human Nature* I, IV.2 (189, 191))

Leibniz had to answer the problem of how sensory qualities could come to be perceived by the soul, supposing that they are wholly physical in themselves and that the soul is wholly non-physical. The answer is found in his doctrine of pre-established harmony (a). Compare also Malebranche, *De la recherche de la vérité*, III.2.6 (447), on seeing all things in God: 'It is he who makes [our souls] feel pain, pleasure, and all the other sensations, through the natural union he has established between them and our bodies, which is but his decree and his general will'. Understandably, this approach did not win wide applause, and others developed a theory of mental entities that are representative by themselves. (For an overview of representation theory, see Slezak 2002.)

Locke does not emphasise the subjectivity of representations (b), and modern scholars have doubted whether he understands representative ideas as internal objects or whether he instead tends to identify ideas with the acts of perception. (Arnauld, for instance, takes all ideas as acts of thought, and this is true even for sensory ideas; see Cook 1994.) But it was easy to interpret Locke as a straightforward representationalist, and this was the way in which he was usually read. The representationalist reading would mean that all immediate perceptual awareness is about sensory representations. After the trust in the testimony of the primary qualities was lost, the next step was inevitable: no perception of external objects was possible. Berkeley prefers to see ideas as contents of mind without any representative nature, whereas Hume sticks to the representationalist model and brings it to a conclusion. He holds that ideas appear as intentional but this does not show anything about external things, which all are in no way perceptible (c). 'The mind is a kind of theatre, where several perceptions successively make their appearance; pass, re-pass, glide away, and mingle in an infinite variety of postures and situations ... They are the successive perceptions only, that constitute the mind' (*A Treatise of Human Nature* I, IV.6; see p. 35 above). Only some of these 'perceptions' are sensory perceptions; they differ from others because of their greater 'vividness' (cf. pp. 158, 168, 237, and 345 below), not because of any mark of external origin. '[The] universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us, that nothing can ever be present to the mind but an image or perception, and that the senses are only the inlets, through which these images are conveyed, without being able to produce any immediate intercourse between the mind and the object ... No man, who reflects, ever doubted, that the existences, which we consider, when we say, *this house* and *that tree*, are nothing but perceptions in the mind ...' (*An Enquiry concerning Human Understanding* XII.1). Thus, the possible origin and regularity of these subjective perceptions is inexplicable. The force of Hume's position is evident, even though the response was negative among his immediate contemporaries. On representation in Locke, Berkeley, and Hume, see Ayers 1991, 44–66, 155–172; Yolton 1996, ch. 5; Pappas 2000, ch. 6; Garrett 2006; Schumacher 2008.

8 The Phenomenology of Sensation

a. Memory is always needed for attention, and when we are not forewarned, so to speak, to pay heed to certain of our own present perceptions, we let them pass by without reflexion and even without noticing them. But if someone alerts us to them immediately afterwards, and makes us notice, for example, some noise which was just heard, then we remember it and are aware of having just had some sensation of it. Thus, there were perceptions of which we were not straight away aware, and the awareness arose in this case only when we were alerted to them after an interval, however small. In order to give a still better idea of the minute perceptions which we are unable to distinguish in the crowd, I like to make use of the example of the roar or noise of the sea which strikes us when we are on the seashore. To hear this noise as we do, we must surely hear the parts which make up this whole, that is, the noise of every wave, although each of these little noises makes itself known only in the confused collection of all the others, and would not be noticed if the wave which made it were the only one. For we must be slightly affected by the movement of this wave, and have some perception of each of these noises, however small they may be; otherwise there would not be this perception of a hundred thousand waves, since a hundred thousand nothings cannot make something. (Leibniz, *Nouveaux essais sur l'entendement humain* (54))

b. The smell of a rose signifies two things. *First*, A sensation, which can have no existence but when it is perceived, and can only be in a sentient being or mind. *Secondly*, It signifies some power, quality, or virtue, in the rose, or in effluvia proceeding from it, which hath a permanent existence, independent of the mind, and which, by the constitution of nature, produces the sensation in us. (Reid, *An Inquiry into the Human Mind* 2.9 (84))

c. A second inference is, That although colour is really a quality of a body, yet it is not represented to the mind by an idea or sensation that resembles it; on the contrary, it is suggested by an idea which does not in the least resemble it. And this inference is applicable, not to colour only, but to all the qualities of body which we have examined. (Reid, *An Inquiry into the Human Mind* 6.6 (204))

d. We have reason to believe, that the rays of light make some impression upon the *retina*; but we are not conscious of this impression; nor have anatomists or philosophers been able to discover the nature and effects of it; whether it produces a vibration in the nerve, or the motion of some subtile fluid contained in the nerve, or something different from either, to which we cannot give a name. Whatever it is, we shall call it the *material impression*; remembering carefully, that it is not an impression upon the mind, but upon the body; and that it is no sensation, nor can resemble sensation, any more than figure or motion can resemble thought. Now, this material impression, made upon a particular point of the *retina*, by the laws of our constitution suggests two things to the mind, namely, the colour, and the position of some external object. (Reid, *An Inquiry into the Human Mind* 6.8 (229–230))

e. A single glance does not give an idea of what is seen. – Suppose a chateau commands a wide abundant landscape to which nature has shed variety and art has

provided further embellishments. We arrive in the chateau during the night. In the morning the windows open at the moment when the sun begins to gild the horizon, and immediately close again.

Though this landscape is shown to us only for an instant, we certainly see everything that it contains ... But this first instant is not enough to make us know this landscape, that is, to make us distinguish the objects it contains; hence, when the windows close again, none of us could tell what he had seen. This is how one can see much and learn nothing.

Finally the windows open and do not close again, the sun has risen, and we see again constantly what we already have seen ... In order to know this landscape, it is not enough to see it all together; we must see each part of it after another; and instead of embracing everything in one glance, we must rest our gaze successively on object after object. This is what nature teaches all of us. If she has given us the faculty of seeing a multitude of things at once, she has also given us the faculty of looking at only one, that is, of directing our eyes on a single thing; and it is to this faculty, a result of our organisation, that we owe all the knowledge that we acquire by sight. (Condillac, *La Logique, ou les premiers développemens de l'art de penser* I, 2)

For early modern authors, what ought to be counted as a single event of perception was not generally considered a problem: it was thought that a single event of perception was simply that which took place concerning one object and did not consist of any further perception events. In this respect, Leibniz's view is exceptional, since according to him every normal perception is a product of innumerable many subliminal 'minute perceptions' (*petites perceptions*) which are real but unnoticed in themselves (a). These perceptions are 'minute' in two ways: they are weak, and they are unconscious (see Kulstad 1991). For a similar thought in Augustine, see pp. 427, 439–440 below. This is contradicted in Berkeley's thesis of *minima sensibilia*: 'The *minimum visibile* having (in like manner as all other the proper and immediate objects of sight) been shewn not to have any existence without the mind of him who sees it, it follows that there cannot be any part of it that is not actually perceived, and therefore visible. Now for any to contain several distinct visible parts, and at the same time to be a *minimum visibile*, is a manifest contradiction. Of these visible points we see at all times an equal number' (*An Essay towards a New Theory of Vision* 81–82); see also M. Atherton 1990, 133–137.

Reid strives to give a careful critique of representationalism. 'It is very strange, that philosophers, of all ages, should have agreed in this notion, That the images of external objects are conveyed by the organs of sense to the brain, and are there perceived by the mind. Nothing can be more unphilosophical' (*An Inquiry into the Human Mind* 6.12 (284–285)). According to Reid, perception is strictly about the perceived objects themselves. It can be caused by physical processes, but that does not mean that the mind receives

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or considers any representations, simply because there exist no such entities as ‘representations’ (**b–d**). In fact, he is not far from Locke if we read Locke as a non-representationalist. (see Nichols 2007.) However, Reid differs from the empiricists in insisting that conscious perceptions involve also belief (Pelser 2010).

French sensationalists emphasise the nature of sensation as the fundamental experience which cannot be further analysed. ‘The first faculty which we see in a living human being and from which all the others flow is *sensing*. Though this faculty seems inexplicable at first, if we examine it more closely we find that it follows from the essence and the properties of organic beings, just as gravity, magnetism, elasticity, electricity, etc., result from the essence and nature of some others’ (d’Holbach, *Système de la nature* I.8 (133)). Condillac, however, makes also closer remarks of certain distinctions that are important for the phenomenology of perception, such as pure sensation, registration, organisation, precision, and attention (**e**). For attention, see also Leijenhorst 2007. On the discussions about visual illusions, see Wade 1998, ch. 8.

9 Joint Operation of Functions in Perception

a. I first say, then, that the ear does not know sounds, and that it serves only as an instrument and organ for making them pass into the mind which considers their nature and properties. Consequently, the beasts do not have knowledge of these sounds, but only the representation, without knowing whether what they apprehend is a sound or a colour or something else; so that one can say that they do not so much act, as they are put into action ... But when man is touched by sounds, he considers their nature and properties, distinguishes them from other objects, and forms a very certain knowledge of them; which shows evidently that he has a faculty and a power of knowing that depends in no way on the senses. (Mersenne, *Harmonie universelle* (II, 79–80))

b. I shall here insert a Problem of that very Ingenious and Studious promoter of real Knowledge, the Learned and Worthy Mr. *Molineux*, which he was pleased to send me in a Letter some Months since; and it is this: ‘Suppose a Man born blind, and now adult, and taught by his touch to distinguish between a Cube, and a Sphere of the same metal, and nighly of the same bigness, so as to tell, when he felt one and t’other, which is the Cube, which the Sphere. Suppose then the Cube and Sphere placed on a Table, and the Blind Man to be made to see. *Quaere*, Whether by his sight, before he touch’d them, he could now distinguish, and tell, which is the Globe, which the Cube.’ To which the acute and judicious Proposer answers, ‘Not. For though he has obtain’d the experience of, how a Globe, how a Cube affects his touch; yet he has not yet attained the Experience, that what affects his touch so or

so, must affect his sight so or so; Or that a protuberant angle in the Cube, that pressed his hand unequally, shall appear to his eye, as it does in the Cube.' I agree with this thinking Gent. whom I am proud to call my Friend, in his answer to this his Problem; and am of opinion, that the Blind Man, at first sight, would not be able with certainty to say, which was the Globe, which the Cube, whilst he only saw them. (Locke, *An Essay concerning Human Understanding* II.9.8)

c. But if we take a close and accurate View of the Matter, it must be acknowledg'd that we never See and Feel one and the same thing. That which is Seen is one thing, and that which is felt is another. If the Visible Figure and Extension be not the same, with the Tangible Figure and Extension, we are not to infer, that one and the same thing has divers Extensions. The true Consequence is, that the objects of Sight and Touch are *two distinct things*. (Berkeley, *An Essay towards a New Theory of Vision* 49; cf. 136–137)

It is not only certain, that any *Idea* of Sight might not have been Connected, with this or that *Idea* of touch, we now observe to accompany it: But also, that the greater Visible Magnitudes might have been Connected with, and Introduced into our Minds, lesser Tangible Magnitudes, and *Vice Versa*. ...

As we see Distance, so we see Magnitude. And we see both, in the same way that we see Shame or Anger, in the Looks of a Man. Those Passions are themselves Invisible, they are nevertheless let in by the Eye along with Colours, and alterations of Countenance, which are the immediate *Object* of *Vision*: And which signifie them for no other reason, than barely because they have been observ'd to accompany them. (Berkeley, *An Essay towards a New Theory of Vision* 63, 65)

d. So I conclude that we undoubtedly gain greatly from the collaboration of our senses and of our organs. But this would again be quite different if we exercised them separately, and if we never used two when the help of a single one would suffice. Add touch to vision, when the eyes are enough: that is to harness a third horse to draw from one side the bow that two lively horses are already drawing from the other side. (Diderot, *Lettre sur les aveugles* (819))

This is my view on the preceding two questions: I think that when the eyes of someone born blind open to light for the first time, he perceives nothing at all; some time is needed for his eyesight to adapt, but it adapts by itself without the help of touch. It comes not only to distinguish the colours, but to discern at least the rough outlines of objects. (Diderot, *Lettre sur les aveugles* (855))

e. It is said that the cantatas of Bernier cured the fever of a French musician; they would have caused fever in a musician of any other nation. The same differences can be observed in other senses, even the crudest. Suppose a man has his hand resting on and his eyes fixed upon the same object, and in one case believes it to be alive and in another not alive: though the effect on his senses would be the same, what a change in the impression! ... If those who philosophise about the power of sensations would begin by distinguishing pure sense impressions from the intellectual and moral impressions that we receive through the senses, but of which the senses are only the occasional causes, they would then avoid the error of giving to sensible objects a power they do not have, or that they have only in relation to the affections of the soul which they represent to us. (Rousseau, *Essai sur l'origine des langues* 15)

According to the classical view, a unified perceptual awareness is generated by an inner sense. By contrast, Mersenne assumes that each sense is independent and only provides the material for processing to the intellect, which creates a co-ordinated representation of all sensory data **(a)**. This idea is connected to the gradual disappearance of the common sense (see pp. 161, 163 below). In the co-ordination of senses, Leibniz also grants a role to intellect when he asserts that if the blind man of the Molyneux case is first told that the bodies are a cube and a sphere, then he will indeed be able to identify them at once because only one of them is uniform (*Nouveaux essais* II.9.8).

The empiricists, however, preferred to think that senses achieve coordination by experience alone. This is clearly shown by the manner in which Locke answers Molyneux's problem **(b)**. For Locke, this problem is apparently an interesting psychological issue, whereas Berkeley draws much wider consequences from it, arguing that it confirms his thesis that different senses have completely separate objects **(c)**. Thus he eliminates, not only the common sense, but even common sensibles (see M. Atherton 1990; Brykman 1996). Cf. also Condillac, *Traité des sensations* III.4. Locke took the problem as a thought experiment, but a generation after him the first medical experiments of curing blindness aroused much attention. Their reports, however, were ambiguous and controversial. Concerning the discussion around the Molyneux problem see Evans 1985; Degenaar 1996; Glenney 2012.

In his *Essay towards a New Theory of Vision* (55–59, 144), Berkeley claims that the sense of touch is primary in that other senses must locate and identify their objects in terms of tangible objects. This view found considerable support. 'It is by touch alone that we can acquire full and real knowledge; it is the sense which corrects all the others, whose effects would be only illusions and produce only errors in our minds, if touch did not teach us to judge' (Buffon, *Histoire naturelle, générale et particulière* III (363)). Condillac agrees, arguing that the experience of the externality of external objects stems from touch (*Traité des sensations* II.5 (103–106)).

According to Diderot, perception is crucially dependent on learning and practice and gains from the co-ordination of senses, though different senses can also disturb each other **(d)**. Rousseau makes the novel point that the sensory experience itself can be different depending on whether the sensed thing is supposed to be pleasant and fascinating, or instead repulsive; such emotionally loaded cases contain no 'pure' external perception determined by physical qualities alone **(e)**. On the eighteenth-century French discussion about sensation, see Riskin 2002, ch. 2.

Part III
Common Sense, Imagination,
and Estimation

Chapter 7

Common Sense and *phantasia* in Antiquity

Miira Tuominen

Questions concerning the scope, content, and richness of perceptual cognition were widely debated in the ancient philosophical schools. More specific problems related to this theme arose from recognition of the obvious fact that the senses alone are insufficient for explaining the variety of human and animal cognition. Whether or not all such cognition should be ascribed to reason was a matter of debate. Most importantly, opinions diverged with respect to the following questions. Do we have perceptual reflexive cognition, that is, do we perceive that we perceive, or is reflexivity an essentially rational capacity? How can the unity of perceptual cognition be explained in light of the fact that the senses are separate from each other and have unique objects of their own? In a similar vein, if the proper objects of the senses are qualities (for example, flavours are the proper objects of taste), can we perceive things at all? Further, how can absent objects be present to the perceptual soul? To simplify, Aristotle and the Aristotelians were more willing to attribute these cognitive functions to the perceptual soul (2–5), whereas Plato and the Platonists tended to ascribe them to reason (for example, 4–5, see also the section on perception above). In the Aristotelian tradition, reflexive perception and the unity of perceptual cognition were explained by reference to the so-called ‘common sense’ (*koinē aisthēsis*) (1–2, 5–8), whereas the presence of absent objects to the perceptual soul was attributed to a capacity called *phantasia* (9–13).

Given the separateness of the several senses, the question of the unity of perception is a pressing problem. It continues to be a problem; today a similar puzzle is known as ‘the binding problem’ in neuroscience. Plato denied that the perceptions

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of the several senses would be sufficient to explain perceptual unity. Aristotle agreed but drew a different conclusion: he argued that the perceptual faculty must be one and that it functions through the several senses (1). According to Aristotle, the unity of our perceptual faculty also explains the perception of qualities that are not proper to a single sense (2) and the fact that it is possible to perceive similarities and differences between qualities proper to distinct senses and the objects to which they belong (3–4). Further, without a unified perceptual centre my simultaneous perception of whiteness and sweetness would not differ from my perception of whiteness and your perception of sweetness (3).

Aristotle introduced the idea of a unified perceptual centre, the ‘common sense’ (*koinē aisthēsis*), in his discussion of the functions of the perceptual soul in the *De anima* (1–5). He did not formulate the common sense as having a distinct role with specific cognitive functions, but in the late ancient commentaries on the treatise, the common sense came to play a more systematic role, and well-defined cognitive tasks were assigned to it (6). Even so, the exact role of the common sense in the perceptual system continued to be debated (7), and the schools also disagreed about its location (8). In general, the common sense was associated with those functions of the perceptual soul which are not explicable by the several senses as such (for example, reflexive awareness, apprehending appearances, unifying perceptual experiences). Many later Platonists followed Plato in claiming that such functions need to be rational (see also the section on perception above). For later Platonists, the capacity of appearance (*phantasia*) came to have the role of the unified centre of awareness (see p. 420 below).

A particularly noteworthy aspect of the ancient discussions concerning reflexive perceptual awareness is the dispute about its rationality. Aristotle and the Aristotelians claimed that human beings and other animals perceive that they perceive – Alexander of Aphrodisias attributed this function to the common sense (5–6). From this it follows that non-human animals also have a very elementary form of ‘self-awareness,’ insofar as they are aware that they perceive. Later Platonists argued that such reflexive cognition should be ascribed to reason; a general form of this argument is that reason alone, being completely immaterial, can turn to itself (see p. 117 below).

In addition to our ability to think and reason about things which are not present to our senses at a certain moment, we can also entertain an appearance of them, or imagine them. The Greek word *phantasia*, which was used to refer to such cases, derives from the verb *phainesthai*, ‘appear,’ and implies that something appears to us. In particular, *phantasia* carries the connotation that, while something *appears* to us to be the case, in fact it is not; the word perception (*aisthēsis*), by contrast, often implies that something which appears to be the case actually *is* (9). Thus, *phantasia* is used to describe perceptual error, but it also refers to imagination. The Stoics, however, used the notion of appearance (*phantasia*) in their analysis of perception (12), and this practice influenced later writers such as Alexander of Aphrodisias (13).

Plato characterised appearance (*phantasia*) as a blending of perception and belief. Aristotle criticised this view and located *phantasia* in the perceptual soul, thus understanding it as a non-rational function (9). In addition to perceptual error and imagination, the capacity to deal with appearances was used to explain dreams

(see pp. 176–179 on dreams below) and animal behaviour, as well as human deliberation. It also had an intimate link to thought, as Aristotle claimed that thinking is necessarily connected to a *phantasma*, and the role of *phantasia* in mathematical thinking was often stressed (10). Some later authors posited a special faculty called *phantasia* or *to phantastikon* (9). To account for the variety of functions assigned to *phantasia*, Plotinus separated the capacity to deal with strictly sensual appearances (*phantasiai*) from a separate, rational *phantasia* (11). However, he argued that none of these is strictly confined to a separate type of object, since otherwise the rational soul would become entirely detached from the sensual and materialised soul functions.

In the Hellenistic debates, the notion of appearance also became a central epistemological notion. The Stoics claimed that in perception something appears to us to be the case, and in adult human beings such appearances are rational. If an appearance is assented to, a belief ensues, both in ordinary perception and in evaluative (emotional) cases. Some Stoic sources distinguished between a *phantasia* and a *phantasma*, saying that the former is caused by an external object, whereas the latter is not (12). In general, the Stoics did not suppose that all appearances (*phantasiai*) must be true; however, they were famous for introducing a special class of appearances that guarantee their own truth – an idea disputed by the sceptics (13).

1 Unity of Perception

a. Socrates: Now if someone asked you the following: ‘By what does a human being see white and black, hear high and low pitches?’, I presume you would say ‘With eyes and ears’.

Theaetetus: Yes I would.

Socrates: ...Consider this, then. Which of the two responses would be more accurate: that the eyes are those with which we see, or that the eyes are those through which we see? And do we hear with the ears or through the ears?

Theaetetus: To me it seems, Socrates, that it is through them that we perceive each thing rather than with them.

Socrates: Yes, my son, it would be uncanny, would it not, if many perceptions were sitting inside us as if we were wooden horses and not all converging in one form, be it either the soul or whatever we should call that with which we perceive everything, insofar as it is perceptible, through those things as if they were instruments? (Plato, *Theaetetus* 184b–d)

b. [T]he air makes the pupil such and such, and the pupil does the same to another, and the same goes for hearing; the ultimate point of arrival is one, and it is a single mean, but its being is plural ... (Aristotle, *De anima* III.7, 431a17–20).

c. Therefore, as stated before, the soul must have some one thing by which it perceives everything, and different kinds of objects it perceives through different senses. (Aristotle, *De sensu* 7, 449a8–10)

In the *Theaetetus*, Socrates presents the idea that we should not ascribe perception to the senses, since this would lead to the unacceptable consequence that the perceptions are just ‘sitting inside us’. By contrast, Socrates suggests that in fact it is the soul with which we perceive, or to which perceptions should, strictly speaking, be attributed. The senses are rather more like instruments (*organa*, 184d4 quoted in (a)) through which (*dia*) the soul perceives. (For Plato’s analysis of the content of perception, see Cooper 1970; Burnyeat 1976 and Frede 1987a.) Aristotle follows Plato in supposing that the several senses in and of themselves do not explain the unity of our perceptual awareness. Rather than explaining this by a reference to the unity of a single form (*idea* in a) or soul, he argues that the perceptual faculty is unified even though it functions through the senses (b–c). Elsewhere he also specifies that we should not, strictly speaking, attribute perceptions to the soul. Rather, it is the *human being* who is the proper subject of perceptions, and the soul is something *through which* (*tē psukhē*) we perceive (*De anima* I.4, 408b13–15). Later, in the commentaries on Aristotle’s *De anima*, the perceptual faculty as a unity comes to be identified with the common sense (7). Plotinus’ view on the unity of perception is discussed in Emilsson 1988, 101–106; see also 7 below.

2 Common Sensibles

a. Socrates: And are you also willing to agree that what you perceive by one power is impossible to perceive by another – for instance, what you perceive through hearing is impossible to perceive through sight, and what you perceive through sight is impossible to perceive through hearing?

Theaetetus: How would I not be willing to accept that? ...

Socrates: And of all these things, through what do you think this happens? For it is impossible, either through hearing or through sight, to grasp something that is common to both of them. (Plato, *Theaetetus* 184e–185b)

b. But it is not possible for there to be any proper organ for the common sensibles, such as movement, rest, shape, size, and number, which we perceive incidentally by each of the senses, for we perceive each of them through movement... Therefore, it is clear that there cannot be any proper sense concerning the common objects, such as movement ... For the common objects we have the common sense, not incidentally. Thus, they are not the proper [objects of any particular sense]. (Aristotle, *De anima* III.1, 425a14–28)

c. The apprehension of the so-called ‘common sensibles’ is also through this [the common perceptual capacity]. Each of the common sensibles is conveyed [to the common sense] along with the proper sensibles of each individual sense through their proper organs. Sight is changed by colour which exists together with magnitude, shape, rest, movement, number, and spatial distance. And the colour, then, changes this capacity by existing together with these [attributes], and the changes originating

from these are carried [to the perceptual capacity] together with the colour. The capacity which distinguishes between colours does not distinguish between these; rather, distinguishing between them is the task of the common sense. That [they are not distinguished] by sight is clear from the fact that they do not only accompany colours but also sounds and all the objects of the other senses. Therefore, it is established that these [that is, the common objects] are neither visible nor audible, nor are they the proper sensibles of any of the other senses distinguished above. (Alexander of Aphrodisias, *De anima* 65.10–21)

Plato raised the question about whether it is possible to perceive something that is common to the proper sensibles and answered in the negative (a). By contrast, Aristotle argued that there are objects which he calls ‘common sensibles’: movement, rest, shape, size, and number (b). They are not the objects of any particular sense restrictively, nor is there an additional separate sense for them (see also 7 below), but yet Aristotle takes them to be objects of perception rather than reason or intellect. The main point of his account here seems to be that the common sensibles are objects of the perceptual capacity taken as one and in that sense common to all the separate senses (cf. Gregoric 2007, 77–79). For the reading that the expression *aisthēsis koinē* refers to the separate senses, see Pseudo-Philoponus, *In De anima* 460.17–19 (discussed in Gregoric 2007, 76). According to Alexander of Aphrodisias, the common sensibles are transmitted to the common sense from the sense organs which are changed by the proper sensibles. For example, when a colour changes the organ of sight, the shape of the seen object is also passed on to the common sense (c). (See also Gregoric 2007, 29–30.) For Aristotle’s treatment of Plato’s question (a) concerning whether the separate senses perceive each other’s objects, see 3a–b below.

Elsewhere in the *De anima* as well as the *Parva naturalia*, Aristotle also uses expressions other than the ‘common sense’ (*koinē aisthēsis*) to refer to functions which the perceptual faculty is supposed to perform but which do not belong to the five senses. Other expressions in the psychological works are ‘common capacity’ (*koinē dunamis* in *De somno* 455a16), ‘primary sense faculty’ (*prōton aisthētikon* in *De memoria* 451a17), and ‘nonspecific sense faculty’ (*aisthētikon pantōn* in *De sensu* 451a17–18). For an explanation of the terminology, see also Modrak 1987, 67–68. *Koinē aisthēsis* only occurs a couple of times in the whole preserved corpus: in *De anima* III.1, 425a27 with a reversed word order, in *De memoria* 1, 450a10–11 (see below 6a) and in *De partibus animalium* IV.10, 686a31–32. There are two additional occurrences of the expression: in *Historia animalium* I.3, 489a17 Aristotle speaks of touch as a common sense since it belongs to all animals; the second instance, in *Metaphysics* I.1, 981b14, is not necessarily related to the more technical meaning of the expression in *De anima* III.1. Gregoric 2007 has a thorough discussion of all occurrences, and he also concludes that the expression *koinē aisthēsis* has different uses in Aristotle (p. 124). For the variety of functions which the sensory capacity as a whole performs, see his general conclusion (202–214).

3 Comparing the Proper Objects of Particular Senses

a. Each sense, then, is concerned with its underlying sensible object, belongs to a sense organ as a sense organ, and discerns the differences of the underlying objects: for example, sight discerns white and black, taste sweet and bitter, and similarly in all cases. Since we also discern white from sweet, and each sensible quality with respect to any other, we also perceive by some capacity that they differ. It must be by perception that we do this, since they are perceptible objects ... It is not possible to distinguish that white is different from sweet by separate capacities, but both of them have to be clear to some one thing. [If this were not the case,] when I perceive one thing and you another, it would be clear that they differ from each other. Therefore, it must be some one thing that declares them different. (Aristotle, *De anima* III.2, 426b8–21)

b. The senses perceive each other's proper objects incidentally, not as they are, but as one, when a perception of the same thing is generated at the same time, for example, of bile that it is bitter and yellow (for, it is not the task of some other thing to say that they are both one), and this is why one also errs when something is yellow and one therefore takes it to be bile. (Aristotle, *De anima* III.1, 425a30–b3)

c. When through a single capacity we perceive that the same liquid is announced by taste as being bitter and by sight as being yellow, and then at another time one happens to grasp it merely as yellow through sight, the capacity immediately adds the bitter without waiting for the taste. In such a case, it is not sight that errs but that one capacity in which both sight and taste converge. For it is the task of this [capacity] to make the function of those two unified, and to declare about the bile and the bitter and the yellow that the two qualities belong to a single body, and for this reason one also errs about these things. (Themistius, *In De anima* 82.23–31)

d. It is the task of the common sense, Aristotle says, and not that of any particular sense to declare that honey is one thing, even though sweetness is an object of taste, and yellow is a colour. (Pseudo-Philoponus, *In De anima* 461.18–20)

Even though the senses cannot strictly speaking perceive each other's proper objects, the fact that, in perception, we make comparisons between the qualities which belong to different sense modalities needed to be explained. We can distinguish the difference between white and sweet, not just register two separate qualities and classify everything white together and everything sweet together. Aristotle argued (**a**) that this shows that there must be a unified perceptual centre, since otherwise me perceiving something white and something sweet would not differ from me perceiving white and you perceiving sweet. (Aristotle calls the perceptual centre the 'common capacity', see **5b** below.

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Plato denied that we, strictly speaking, *perceive* that distinct qualities belong to some one thing (*Theaetetus* 186c–d, quoted below). This is something that the soul needs to gather and infer from perceptions, and these combinatory and inferential functions belong to reason; in other dialogues he gave different accounts of the scope of perception and its relation to belief; see Sorabji 1993, 9–12 for references. By contrast, Aristotle claimed **(b)** that we do perceive about bile (one thing) that it has two qualities (bitter and yellow), and this is how we can be led to the error of taking everything yellow as being bitter; see also *De sensu* 7, 449a2–5.

Themistius specifies Aristotle's example of perceiving bitter and yellow as follows: the perceptual error which is at stake is that one first perceives something yellow and takes it to be bitter without tasting **(c)**. According to Themistius, in this case it is not any particular sense that errs but the mistake should be attributed to the unified perceptual faculty or centre. The crucial point here is that both Aristotle and Themistius seemed to suppose that such an error is not one of reasoning. Aristotle discusses a similar case, a 'fallacy' of perception that babies make, in the *Sophistical refutations* (5, 167b4–6). The mother first applies honey to her breasts to encourage the baby to feed, and when she wants to wean the baby she changes honey to bile. The child is then misled to expect a sweet taste on the basis of the yellow colour. The baby starts to feel strong aversion towards the breast that is bitter instead of sweet. For an analysis of this example, see Schreiber 2003.

The important point in the text quoted from Pseudo-Philoponus is his explicit identification of the perceptual centre with the common sense **(d)**. This is a reasonable move to make in the Aristotelian framework, but explicit statements of this kind are not common.

4 Is It Possible to Perceive Things Rather Than Qualities?

a. Socrates: Thus there are some things which human beings and animals can perceive straight from birth, such that they originate in bodily affections and extend to the soul. But reasoning about their being and usefulness come about only in time through training and education, in those for whom it does come about at all.

Theaetetus: Yes, that is most certainly so.

Socrates: And is it not possible for one who does not grasp being to arrive at truth?

Theaetetus: How could that be, Socrates?

Socrates: Thus, in those affections there is no knowledge, but it lies in reasoning about them. For, it seems, it is possible to grasp being and truth here on the level of reasoning, and impossible there in the affections.

Theaetetus: So it seems. (Plato, *Theaetetus* 186c–d)

b. It is called an incidental sensible if, for example, a white [thing] is the son of Diares, for it is perceived incidentally because it belongs incidentally to the white which is perceived. (Aristotle, *De anima* II.6, 418a20–23)

c. Things which are not perceptible in themselves are said to be incidentally perceptible when they belong to those which are simply perceptible. For Diares, or Diares' son, is perceptible not as Diares, but perceptible when whiteness belongs to Diares. Aristotle interprets the incidental perceptibles as follows: those things are perceived incidentally which incidentally belong to those which are perceived, and thus he would say that Diares is perceived incidentally because being Diares incidentally belongs to the white which we perceive. (Themistius, *In De anima* 58.5–11)

d. But we must state that perception is altogether without reason. For in general each sense recognises the effect in the animal caused by the perceptible. For example, when an apple is presented, sight cognises it as red from the effect in the eyes, smell that it is sweet-smelling from the effect in the nostrils, taste that it is sweet and touch that it is smooth. What is that which says that this thing presented is an apple? It cannot be any of the separate senses, for each of them recognises some one [quality] of it and not the whole; nor can it be the common sense because it only distinguishes the differences between effects but does not know that the whole has such an essence. It is thus clear that there is a capacity superior to the senses that recognises the whole prior to its quasi-parts and grasps its form as a whole; it is that capacity which comprises these many capacities. Plato has named this capacity 'belief' and that which is perceptible through it 'an object of belief'. (Proclus, *In Timaeum* I, 249.12–27)

Plato's argument (**a**) mainly concerns the relation between perception and knowledge. However, the passage is important for our present topic because it can be taken to entail that perception does not recognise things (Sorabji 2005 vol. 1, 33). Proclus denies that perceiving a thing *as something* could be a function of the perceptual faculty (**d**), even when understood as a whole. Here he might be building on the quoted passage in Plato. Proclus' point seems to be that recognising a thing *as something* presupposes conceptual capacities, and since perception in and of itself does not include conceptual capacities, perceptual recognition must be ascribed to reason. (His reference to essence and form must mean perceptual essence and form; the proper essences and intelligible forms are objects of the intellect.) For an interesting precursor of the passage, see Alcinoüs, *Didaskalikos* 4.7 (esp. line 16); for a parallel of Proclus' account, see also Plotinus, *Enneads* VI.4.11, 12–15. Aristotle would agree that perception as such does not contain universals; however, he claims that some non-universal recognition of objects is possible

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for animals, and this is explained by reference to incidental sensibles (**b**). Even though things do not affect our senses as such, they affect incidentally our senses by means of their qualities. For incidental perception in Aristotle, see, for example, Cashdollar 1973 and Owens 1982 (cf. also Aristotle, *De an.* 425a25–28). Themistius explains the point of incidental perception by referring to the accidental quality of the relation between a perceived quality and an individual thing (**c**): we perceive Diare incidentally because it is incidental that the white that we perceive is Diare; it could have been his son or anything else.

5 Perceiving That We Perceive

a. *Socrates*: Consider, then, if you think there is a kind of sight or vision that is not concerned with those things that other visions are, but is of itself, of the other visions, and similarly of their lacks of vision; and even though it is a vision, it sees no colour, but only itself and the other visions. Does it seem to you that there is such a thing?

Critias: By Zeus, it does not ...

Socrates: And now study all the senses collectively and see if any of them seems to be a sense of the other senses and of itself, a sense that senses the perceptions of the other senses, but none of the objects that the other senses perceive.

Critias: It does not seem like that to me. (Plato, *Charmides* 167c–d)

b. Since in the case of each sense something peculiar and something common belongs to it, what is peculiar being such as seeing to sight and hearing to the sense of hearing, and similarly with each of the other cases, there also is a common capacity following all the senses by which one perceives that one sees and that one hears. For it is not by sight that one sees that one sees, and one also discerns and is able to discern that sweet things are different from white ones not by taste, nor by sight, nor both of them together but by some unified part that is common to all the sense organs. For, there is one sense, and the superior sense organ is one, but being is different for each kind of sense, for example, for sound and colour. (Aristotle, *De somno* 2, 455a12–22)

c. Because we perceive that we see or hear it must be by sight that we see that we see or by another sense; but then there would be the same sense for both sight and the underlying colour, and hence there would be two senses for the same object, or the sense would be about itself. Further, if the sense concerning sight is different, this will continue to infinity, or some sense will be about itself; thus, it would be

better to allow this in the first instance. Now we have a difficulty: if to perceive by sight is to see, and a colour – or that which has a colour – is seen, then if someone sees that which is doing the seeing, that which is first doing the seeing will have a colour. Therefore, it is clear that to perceive by sight is not a unified entity because even when we do not see we distinguish darkness and light by sight, but not in the same way. In addition, that which sees is also coloured in a way, for in each case the sense organ is receptive to the sensible object without the matter. This is why perceptions and appearances are present in the sense organs even when the objects have become absent. (Aristotle, *De anima* III.2, 425b12–25)

d. It is by means of this common capacity that we perceive that we are seeing, hearing, and having other perceptions. For one who sees perceives that he is seeing and that he is hearing, and it is not by any other capacity that we perceive that we perceive [than by the common sense]. We do not see that we are seeing or hear that we are hearing. Nor is seeing visible or hearing audible, but it is through the activity of the first and predominant perception (called ‘common’) that those who perceive come to have perception of their own perceiving. (Alexander of Aphrodisias, *De anima* 65.2–10)

Plato seemed to deny that it is possible to have *perceptual* reflexive awareness, i.e., that we could *perceive* that we perceive (**a**). By contrast, Aristotle affirmed this possibility, but the details of his account are difficult to assess clearly. The core of the problem is that, in the passage from the *De somno* (**b**), Aristotle denies that we see that we see or hear that we hear, that is, he denies that the several distinct senses should be responsible for the awareness of perceptions under the same modality. By contrast, the passage in the *De anima* (**c**) leaves this possibility open. For the view that the passage in the *De somno* is his considered opinion on the matter, see Block (1964, 63). For the view that this is because the *De anima* passage is dialectical or exploratory, see Hicks 1907, 434–435; Kahn 1966, in 1979 reprint, p. 11; Osborne 1983, 405 and Gregoric 2007, Part III, chapter 4. For readings that aim at reconciling the contradiction, see, for example, Caston 2002 (who suggests that perceiving that we perceive is ‘integral to the original seeing’, 769) and Johansen 2005. For the suggestion that perceiving that we perceive is sensory awareness internal in any perception, see also Kosman 1975, 511. Johansen’s interpretation is based on the idea that seeing that we see is an accidental function of sight (260) and hence is not its special function but a common one – and this amounts to saying that it is a function of ‘the common sense’. For criticism of this suggestion, see Gregoric 2007, 182–183.

The most important feature of Alexander’s account is that he, in his treatise on the soul (*De anima*), ascribes reflexive awareness of perceptions to the common sense (**d**). He also uses the term *sunaisthēsis* which he may have taken

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from Stoic vocabulary; the term was common in Neoplatonic commentaries as well. Alexander's position might have contained the same discrepancy as Aristotle's. (For the insertion of *koinēi* in the text quoted in **d**, see Bruns's comments on line 6.) Note that whereas in the *De anima* Alexander denies that the several senses have reflexive functions, in the *Problems* (*Quaestiones* III.7, a treatise originating from Alexander's school) reflexivity is attributed to the senses themselves; this reflects the diversity in Aristotle's account.

Neoplatonic commentators tended to claim that true reflexivity is confined to the immaterial rational soul (see further, Lautner 2004, 168–171). A crucial argument, also repeated by Pseudo-Simplicius (227.26–29), was that only purely immaterial things can turn towards themselves (*epistrephein*). Therefore, reflexivity is confined to reason alone; cf. however, Pseudo-Simplicius, *In De anima* 189.13–28 where he claims that sight makes the judgement that it is not seeing. Here a reflexive function seems to be attributed to sight itself; see also Pseudo-Philoponus, *In de an.* 464.23–4 with a reference to Plutarch of Athens. See also pp. 54, 418, 420.

6 Common Sense: A Faculty with Special Functions

a. But it is necessary to perceive magnitude and change by the same means as time, and the *phantasma* is an affection of the common sense; it is thus clear that cognition of these is a task of the primary faculty of sense. (Aristotle, *De memoria* 450a9–11)

b. Having toiled over the vegetative and the non-rational parts of the soul in the preceding section, he now wants to present his views about the rational soul and to study what is its essence, what are its powers, and what are the differences of these powers when compared to each other and to the less respectable powers of the non-rational soul. Thus he scrutinises the difference between *phantasia* and belief on the one hand, and thought on the other; and, again, between thought and intellect. Being a power of the rational soul, belief seems to have something in common with the common sense and *phantasia*, and for this reason he considers the difference between them. Thus it remains for our present account to consider the rational soul. It is not, as some think, the purpose of our present study to settle the account of the non-rational soul. For even though he gives an account of the common sense and *phantasia*, this is not his primary target; rather, he gives an account of the non-rational soul in order to specify the differences between the powers of the rational soul and those of the non-rational one. Therefore, the focus of the whole treatise is the rational soul, and not the non-rational. (Pseudo-Philoponus, *In De anima* 446.5–18)

c. The most respectable powers of the non-rational soul, such as the common sense and *phantasia*, have something in common with belief, which is the least respectable of all the powers of the rational soul. (Pseudo-Philoponus, *In De anima* 446.27–447.2)

Here we find a rare instance in which Aristotle seems to indicate that the common sense has specifically defined functions (a), namely to cognise things by means of a *phantasma* the precise nature of which is debated among scholars. Some take it as an object of awareness, a mental image of a sort (Frede 1992; Sorabji 1972/2004: xiv–xix, Modrak 2001), whereas others rather understand it as a representational device by which the object appears to us (Wedin 1988; Caston 2006). Pseudo-Philoponus' commentary shows how the accounts of the common sense were systematised in the late ancient commentary tradition (b–c). The common sense is claimed to have a fixed position among the capacities of the perceptual soul, to be one of its highest cognitive powers (for this tendency, see also 3c–d above).

7 Common Sense: A Sense or a Combination of the Several Senses?

a. We have already stated by which [capacity] we distinguish what it is that differentiates between sweet and hot, but the following must [also] be said: it is one thing, but in the same way that a boundary is one. (Aristotle, *De anima* III.7, 431a20–22)

b. [The] common sense can in this way cognise the differences between distinct [kinds of] sensibles at the same time, if the perceptual [capacity] is in one sense a unity and in another sense many and divided. [This happens] in the way the [radii] in a circle which extend from the diameter to the centre are many, but with respect to their limits they are the same, since their limits converge at the centre of the circle. This point is both one and many: insofar as it is the limit of several distinct [things] it is many; insofar as they all converge with one another, it is one. In this way the common sense must be conceived to be one and many. (Alexander of Aphrodisias, *De anima* 63.6–13)

c. Alexander, in his commentary, [wants to claim] that the five senses grasp the objects which are their subject matter, and he wants [to claim] that the common sense grasps both those objects and the activities of the senses. (Pseudo-Philoponus, *In De anima* 464.20–23)

d. He [Aristotle] has presented arguments about the five senses and taught that there is no additional sixth sense as distinct from the five. In order that no one thinks on the basis of this argument that there is no common sense either, he wants, through what follows, to show that there is a common sense – and not only that, but that this common sense is incorporeal, and thirdly, that it acts atemporally – [i.e.,] not that it

would cognise at one instant that something is sweet and then, at another time, that it is white, but that in the same present moment it would grasp that this is sweet and that is white. (Pseudo-Philoponus, *In De anima* 477.20–26)

e. And if that which enters through the eyes and another which enters through the ears must be one, there must be something in which they converge. Or [otherwise], how could one even say that they are different unless the percepts arrived at the very same place at the same time? Thus, this must be like a centre from which lines extend to the diameter of the circle, the perceptions from everywhere having their limits at this centre, and we conceive it to be such, being truly one. (Plotinus, *Enneads* IV.7.6, 8–15)

Aristotle makes clear that our capacity to simultaneously discern the objects of different senses is to be ascribed to one capacity, but he does not explicitly identify this as the common sense (a). This complementary account is found in Alexander (b). For Aristotle it was important to specify that the sense faculty as a whole should not be understood as a distinct sixth sense, and Alexander agreed with him on this. The same position was also repeated in Alexander's lost commentary on Aristotle's *De anima* (reported by Pseudo-Philoponus in c).

When commenting on Aristotle on the common sense, the ancient Greek commentators faced the following problem. Given that the common sense seems to have some functions of its own, it does not seem to be a mere aggregate of the several senses. The unsystematic nature of Aristotle's account opened the possibility for several interpretations. Most commentators seemed to agree that the common sense should not be understood as a separate sense but this does not settle the question of how it is supposed to be connected to the several senses. Metaphors were in extensive use: Alexander's comparison to the radii of a circle (d) was much employed, starting from Plotinus (e) and continuing in the later Platonic commentaries (e.g., Pseudo-Simplicius, *In De anima* 200.14–201.12). Aristotle never calls the common sense the centre of a circle (see Lautner 2000, 431). For Plotinus' use of the metaphor, see Emilsson 1991.

8 On the Location and Anatomy of the Rational Perceptual Centre

a. The Stoics say that the soul's highest part is the commanding faculty which has appearances, assents [to them], has perceptions and impulses; they also call it 'the reasoning part'. From the commanding faculty there are seven outgrowth parts of the soul, extending to the body as the tentacles of an octopus. Of these seven parts of the soul five are the senses: sight, smell, hearing, taste, and touch. Of the senses, sight is the *pneuma* extending from the commanding faculty to the eyes, hearing is the *pneuma* extending from the commanding faculty to the ears. (Stoics according to Aëtius IV.21.1–4 = *SVF* 2.836 = LS 53H).

b. Chrysippus says that it is certain that we breathe and live by one and the same thing. And we breathe by natural spirit. Therefore, we live as well by that very spirit. And we live by the soul. Therefore, the soul is found to be natural spirit ... The parts of the soul flow from their seat in the heart, as though from the source of a spring, and spread through the whole body. (Stoic Chrysippus according to Calcidius, *Ad Timaeum* 220=SVF 2.879=LS 53G).

c. I reject little of the doctrines of Aristotle and the Stoics and it is clear from what I have said that perception comes about from the perceptibles through alteration and discernment. And the organ of sense is altered, and the discernment of this alteration ensues from a single capacity common to all the sense organs and flowing to them from the ruling part. It will make no difference whether you want to call this ruling part ‘the common sense’ or ‘the primary sense faculty’. And the previous account showed this to be the brain, from which all the members derive perception and movement and from which some of the nerves spring to the sense organs for the sake of discernment of the perceptible objects, others moving those which need to be moved, such as the eyes and the tongue and the ears, for in most animals these move. (Galen, *On the doctrines of Hippocrates and Plato* VII.8.1–4)

d. It is thus better to suppose that the soul lodges in the very body of the brain... and that the *pneuma* is the first instrument for all the sensations of the animal, and for its voluntary movements as well. (Galen, *On the doctrines of Hippocrates and Plato* VII.3.21)

e. [*P*]neuma is common to all the sense organs. For the common sense is in this. (Philoponus, *In De anima* 433.34–35)

Aristotle (for example, *De juventute* 3, 469a11–15) and the Stoics (**a–b**) located the perceptual centre in the chest, but whereas Stoics understood it as being rational, Aristotle rather understood it as a non-rational capacity of the animal soul (see, e.g., *De partibus animalium* II.10, 656a28–37). Galen located the soul’s functions to the brain but attributed them to the body of the brain rather than the chambers inside (**c–d**), whereas the view that the functions belong to the chambers became dominant in the Middle Ages (see pp. 131–135 below). Following the Galenic tradition, Philoponus makes *pneuma* the common sense organ, saying that the common sense resides in it (**e**). See also Galen, *On the Doctrines of Hippocrates and Plato* VII.6.22.

9 *Phantasia*, Perceptual Appearance and Opinion

a. Socrates: Would we then say that the same wind itself is in itself cold and not cold? Or, should we be convinced by Protagoras and say that it is cold to that who is cold and not cold to that who is not?

Theaetetus: So it appears.

Socrates: And it appears like that to each of us?

Theaetetus: Yes.

Socrates: And ‘to appear’ here means ‘to perceive’?

Theaetetus: So it does.

Socrates: Therefore, appearance and perception are the same in the case of warm things and other things that are like that. (Plato, *Theaetetus* 152b–c)

b. Eleatic stranger: Thus whenever affirmation or denial occurs in the soul silently in accordance with thought, would you not call it by the name ‘belief’?

Theaetetus: Certainly.

Eleatic stranger: And what about when it does not occur just by itself, but comes to someone through perception? Such a thing would also be an effect, so how could one correctly name it anything other than ‘appearance’?

Theaetetus: There is no other name.

Eleatic stranger: And since there were true and false accounts – on the basis of what was said, thinking seemed to be soul’s dialogue with itself, belief to be the outcome of thinking, and ‘it appears’, as we say, a blending of perception and belief – since these are the same in kind as accounts, some are necessarily false at times. (Plato, *Sophist* 264a–b)

c. That it is not perception is clear from the following. For perception is either a potentiality, like sight, or an actuality, like seeing; but something can appear even when neither of these occurs, such as those that appear in dreams. In addition, perception is always present, but appearance is not. If they were the same in actuality it would be possible for all animals to have appearance, but this does not seem to be the case: take, for example, the ant, the bee, or the grub. Next, perceptions are always true, but appearances are mostly false. Further, we do not say that this appears to us to be a man when we accurately exercise our senses about a sensible object, but rather when we do not perceive clearly whether this is true or false. And, as we said earlier, we can also have visions with our eyes closed. (Aristotle, *De anima* III.3, 428a5–16)

d. Nor will appearance be any of those things which are always true, such as knowledge or intellect, for appearance can also be false. It remains to be seen, then, if it is belief; for belief may be either true or false. But conviction follows on belief (for it is not possible for one to have a belief about certain things and yet not be convinced of them); while no beast has conviction, many have appearances. Furthermore, every belief implies conviction, conviction implies being persuaded, and persuasion implies reason; some beasts have appearances, but none has reason. (Aristotle, *De anima* III.3, 428a16–24)

e. Therefore, it is clear that appearance will be neither belief together with perception, nor belief through perception, nor a blend of belief and perception. [This is clear] both on these grounds, and because belief will have no object other than that which, if it exists, is also the object of perception... But one can also have false appearances of things about which one simultaneously has a true supposition; for example, the sun appears a foot across, although we believe it to be bigger than the inhabited world. (Aristotle, *De anima* III.3, 428a24–428b4)

f. Shall we then posit a power of apprehension as common and ascribe the memory of both [the sensible and intelligible objects] to it? If it were the case that it is one and the same that apprehends both the sensibles and the intelligibles, perhaps this claim would say something [acceptable]. By contrast, if one capacity is divided in two, it will nevertheless be two. And if we give both powers to each soul there will be four powers altogether. In general, what necessity is there that by that with which we perceive we also remember and thus both take place in the same power, and [what necessity is there] that we remember our thoughts by the same power that we also thought about them? For the same people are not the strongest in thinking and in remembering, and those who are equal in perception are not equal in remembering; further, some people are well-equipped with sensory capacities, and others whose senses are not as sharp remember [well]. But again, if each has to be different and a different [power] remembers that which perception previously perceived, does it also have to perceive that which it later is going to remember? Or, rather, nothing prevents the percept from being an image to that which will remember, and it belongs to the image-making power, being different, to remember and to retain [the images]. And that is the place in which perception terminates so that even when [the thing] is not there, the vision is present to it. (Plotinus *Enneads* IV.3.29, 8–26)

Plato associated appearance (*phantasia*) with other cognitive functions and made it a blending of perception and belief (a–b). Aristotle argued against this view (c–e; for Aristotle’s view on the relation of *phantasia* and belief, see, e.g., Moss 2012, section 6.3). (For Proclus’ version of the distinction between appearance and belief, see Lautner 2002a, b. For late ancient interpretations of *phantasia*, see also Blumenthal 1996, chapter 10.)

Alexander of Aphrodisias distinguished appearance (*phantasia*) from perception (*De anima* 67.12–19) with arguments similar to Aristotle’s, even though he also used the notion of *phantasia* to analyse the reliability of perceptions (13 below). In distinguishing appearance from judgement, Alexander also employed the Stoic notion of assent (*sunkatathesis*, 12 below). According to Alexander, not all appearances are accompanied with conviction (*pistis*) because conviction involves assent, which is absent from animals other than human beings.

Plotinus discussed the question of whether the same power can remember both the perceptible and the intelligible objects (f). In the course of his discussion he comes to posit a new power, that for making images (*to phantastikon*), which he sees as the endpoint of perception. The image-making power is the power that makes perceptual judgements and forms the image that can then be retained in memory. The same power is, by a different description, memory. Thus, Plotinus argues, we do not need to suppose that the memory perceives,

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but that it retains and recalls the images or judgements that the image-making power has formed of perceptions. For an analysis of the image-making power as the locus for perceptual awareness and as a meeting point between the more passive perceptual processes and the soul's activities related to it, see also Emilsson 1988, 107–112. For a crucial passage on this point about activity and passivity, see Plotinus, *Enneads* III.6.1, 1–7.

10 *Phantasmata* Are Necessary for Theoretical Thinking and Deliberation, Important in Mathematics

a. *Socrates*: ... I suppose you know that those who practice geometry, calculation and the like hypothesize about the odd and the even, the figures and the three kinds of angles and everything that is akin to it in accordance with each method as if they knew these things; they make these hypotheses but they do not see fit to give an account of them, either to themselves or to others, as if they were about things that are evident to all. Starting from these and going through the rest they end up agreeing with that from which they started the inquiry.

Glaucon: Indeed I do know this.

Socrates: And then you perhaps also know that they use visible forms and make the accounts about them but they do not think about those visible forms but about those that the visible figures are like. They make the accounts for the sake of the square itself and for the diagonal itself, but not for the sake of that which they draw, and similarly with other cases. And these figures, which they mould and draw, and of which shadows and reflections in water are images, they also use as images, striving to see those things in themselves that one does not see in any way other than thought. (Plato, *Republic* VI, 510c–511a)

b. And for this reason, one would not learn or comprehend anything if deprived of perception, and when one is contemplating, it is necessary at the same time to contemplate an appearance; for appearances are like percepts, except that they are without matter... But how do first concepts differ from appearances? And other concepts, too, must not be appearances, but they do not occur without appearances. (Aristotle, *De anima* III.8, 432a7–14)

c. It is not possible to think without an appearance. (Aristotle, *De memoria* 449b31–450a1)

d. Perceptual appearance, as has been said above, also belongs to other animals, but that related to deliberation belongs only to the rational [animal]; to deliberate whether one performs this or that action is already a function of reasoning, and it is necessary to have a single measure for such considerations, for one pursues what is

superior; so one has the ability to unify many appearances. (Aristotle, *De anima* III.11, 434a5–10)

e. When the concept becomes stronger, more diversified, and manifold – so that it is possible to grasp the objects without the underlying perceptual conditions – it is intellectual thinking. (Alexander of Aphrodisias, *De anima* 85.23–25)

f. And for this reason, for everything the intellect thinks, there is a picture or a shape of the thought and it also thinks about a circle as being extended because even though a circle is pure of external matter it has intelligible matter in it. And this is why there is not just one circle in the imagination, as there is not just one circle among perceptible things. For with extension there appears a multitude of circles and triangles differing in size. (Proclus, *On Euclid's Elements* I.52.25–53.5)

g. As nature stands in a productive relation to perceptible figures, so the soul, acting with respect to its cognising principle, projects on the imagination, as on a mirror, the accounts of the figures; *phantasia* thus receives them in pictures and having them as reflections of the ideas in the soul, *phantasia* offers the soul the possibility to turn inwards through them and to exercise what it understands from the pictures. (Proclus, *On Euclid's Elements* I.141.2–9)

Plato had suggested that images of mathematical figures are useful auxiliaries in arriving at mathematical hypotheses and in evaluating them (a). However, he emphasised that none of the inferences conducted about the images of figures, for example, are inferences about the real thing, i.e., the figures themselves. He also points out that mathematicians realise this, and make clear that they are not theorising about the figures they draw or visualise, but rather, about the objects ideally understood.

Aristotle also underlined the importance of appearances or images in thought and claimed that human thought always occurs with an appearance, image or *phantasma* (b–d, for one recent account with references to earlier discussion, see Polansky 2007, 481–493). Unfortunately, he does not elaborate on the claim, nor does he present proper arguments for it. The claim was influential later, and we can speculate as to the reasons Aristotle may have had to make such a statement. One reason might have been that he wants to emphasise that theoretical understanding needs to be rooted in the perceptible world in order for it to be about existing objects. In addition, Aristotle's account of intellectual apprehension is based on the idea that the form of the object is actualised in our intellect. This in itself is a very abstract account and does not tell us how we connect these forms with concrete objects. The requirement that a *phantasma* is present possibly helps bridge this gap.

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Further, if we do not yet have a definition for the object we grasp, it seems that we grasp it without grasping anything in particular about it. For example, if there is a new animal species that we encounter, we understand that it is distinct from all other species that we have encountered, but we might not even have a name for it. In such a case, our understanding would probably simply be ‘this animal conceived as a species’, ‘this something’. Such an abstract conception would be rather pointless unless the reference of ‘this’ is clear. It is possible that a *phantasma* functions by giving it reference, showing which object we conceive when we grasp its form for the first time. When we have accumulated more concepts, it becomes easier to formulate our apprehension in thoughts: ‘this animal’, ‘this virtue of character’, and so on.

It is somewhat difficult to see how Aristotle’s requirement could be satisfied in cases such as the principle of non-contradiction. However, Aristotle does not necessarily mean that the content of the principle should be expressed in images or *phantasmata*; it is possible that a *phantasma* is just needed to stand for an object or application of the principle. Nevertheless, Alexander of Aphrodisias perhaps already revised Aristotle’s categorical statement of the necessity of *phantasmata* for thought; it seems that Alexander did not make *phantasmata* a necessary requirement for most abstract forms of intellectual thinking (*nous*) (e).

Proclus diverged from other late Platonic thinkers with respect to his more positive assessment of geometry (f, g). In particular, he deviates from Iamblichus, who had subordinated geometry to arithmetic. Proclus’ teacher, Syrianus, had also suggested that geometrical figures are projections in the soul which the soul needs to use instead of pure numbers because of its weakness (see O’Meara 1989, 169). For Proclus, the mathematical method of demonstration, definition, division and analysis (*On Euclid’s Elements* 69.9–19) is a reflection or an image of a superior method, namely, the higher dialectic of Plato’s *Republic*. The mathematical figures also are reflections or images of divine qualities; for Proclus’ philosophy of mathematics, see O’Meara 1989, 170–176.

11 *Phantasia* and Reason

a. But if memory belongs to the image-making power (*phantastikon*), we must say that each soul remembers and that there are two image-making powers. When the souls are distinct, let each have an image-making power of its own; but when they are in the same compound around us [i.e., in the perceptible world] how are they two, and in which one do [the memories and images] reside? If they reside in both powers, the images are always double, for it is not the case that one of them is about the intelligibles and the other about sensibles. In such a case there would be two

living beings altogether that have nothing in common with each other. If [the same image-making power] resides in both souls, what difference does it make? And how do we not notice it? When the one is in consonance with the other, when the image-making powers are not separate, and when the [power] of the superior soul dominates, the image (*phantasma*) becomes unified as a shadow that was following the other, or as a smaller light that slips under a greater one. But when there is struggle and dissonance, the first one also becomes manifest in itself, and what happens in the second one escapes our notice. Thus in general, the duality of souls escapes our notice. (Plotinus, *Enneads* IV.3.31, 1–15)

b. Why, then, does he call it ‘the intellect of the soul’? Either he does this in order to distinguish it from imagination, as I already said, for the imagination is not properly an intellect, unless it has an additional qualification. But if it is called ‘passive intellect’ with an additional qualification, then it is not really called ‘intellect’. This is because additional qualifications, as we have often said, in fact annihilate that which they were initially meant to qualify. Or, alternatively, he does this to distinguish it from that which is intellect in actuality (I speak of the contemplative intellect now, which is maximally and in the primary sense an intellect). (Philoponus, *In De intellectu* [ad 429a22–26], ed. Verbeke (13, 00–6))

On the grounds that memory belongs to the power of appearance (cf. **9f** above), Plotinus concludes that there need to be two powers of appearance that are in principle distinct from each other (**a**). One belongs to the soul that becomes enmattered and lives in a soul-body compound. The other one is an intellectual soul that remains disembodied even when united to a soul-body compound (for a collection on Plotinus’ theory of the soul, see, e.g., Chiaradonna, ed. 2005). Plotinus’ argument for postulating a distinct image-making power for each is related to the idea that, if the intellect did not have such a power of its own, it could not have any knowledge or memories of the life of the soul-body compound with which it was combined (for Plotinus on *phantasia*, see, e.g., Nyvlt 2009; Emilsson 2007, 124–127; 191–199). Conversely, if the enmattered soul could not have images of the intelligibles, we would not be aware of the intellectual activity at all (see IV.3.30, 12–17). Since neither of these is acceptable, there must be two image-making powers. This leads to the question of whether we always have double images in our incarnated life. Here Plotinus refers to the notion that the more our soul is in tune with the intellect (and detached from our bodily constitution), the less discrepancy there is between the two kinds of appearance and imagination, and our sensual imagination follows the intellect like a shadow. However, in a disorderly soul the sensual images tend to dominate and leave the intellectual images practically invisible (for the latter point, see also I.4.10). This is not to say that the sensual appearances should

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be rejected or left behind: in the ideal case, they agree with the intellectual appearances and follow them.

Plotinus' distinction led to the tendency in late-ancient Platonism to posit an intellectual power of appearance. Philoponus is resisting this tendency and claiming that *phantasia* is not an intellect or a capacity of the intellect (**b**; see also Philoponus, in *De anima* 5.38–6.4 and 11.7–11). This reflects Aristotle's claim that *phantasia* is a capacity of the animal soul while the intellect is one of the rational soul. Philoponus' opening question is found in Aristotle, *De anima* III.4, 429a22, and the passive intellect is discussed in *De anima* III.5, 430a24–25, but none of these passages makes a connection between *phantasia* and passive intellect.

12 Perceptions as Assenting to an Appearance

a. [Diocles of Magnesia says] that it is sufficient for the Stoics to prioritise the account of appearance and perception, insofar as the criterion by which the truth about things becomes known is an appearance in kind and insofar as the account of assent in cognition and reason, which precedes all others, cannot be composed without appearances. For appearance leads, then thought, which has declarative power, utters in language what it has undergone through the appearance. But an appearance differs from a fancy. A fancy is the sort of seeming in thought which occurs in dreams, whereas an appearance is an imprint, that is, an alteration in the soul, as Chrysippus maintains in the second book of his *On the Soul*; for we are not to take the imprint as the imprint of a signet-ring, since it is incapable of receiving many imprints (otherwise there would be many imprints affecting the same thing at the same time)... According to the Stoics, of the appearances themselves, some are perceptual and some are not. The perceptual ones are those which occur through one or several sense organs, whereas the non-perceptual ones are those which occur through reason, such as those of the incorporeals and other things which are grasped by reason. Some perceptual appearances arise from what is there and occur with yielding and assent. But among appearances there also are impressions which seem to have arisen from what is. (Diogenes Laertius, *Lives of Philosophers* VII.49–51)

b. Further, of appearances some are rational, others non-rational. Rational are those of rational animals, and non-rational ones are of irrational animals. The rational appearances are thoughts, and the non-rational appearances do not happen to have a name. (Stoics according to Diogenes Laertius, *Lives of Philosophers* VII.51)

The Stoics supposed that perception consists of assenting to an appearance (*phantasia*) (a). However, according to Sextus Empiricus, the opinions diverged concerning how to interpret the appearances: Chrysippus defined *phantasia* as a change in the soul (*heteroiōsis en psukhē*) and hence deviated from Cleanthes and Zeno who took it as an imprint in the soul (*tupōsis en psukhē*), compared to the mark a signet-ring makes in wax (*Adversus mathematicos* VII. 228). For a see also Sextus Empiricus, *Adversus mathematicos* VII.230=SVF II, 56; for *phantasia* as an imprint cf. Plutarch, *On the Common Notions against the Stoics* 1084f–1085a. For the distinction between *phantasia* and *phantasma*, see also Aëtius, *Placita* IV.12.1. The precise meaning of the rationality of the appearances in Stoicism (b) is a debated issue among scholars. Two important points of controversy concern, first, the question of whether ‘appearance’ (*phantasia*) refers to the phenomenal or to the conceptual aspect of an appearance; for a discussion, see Barney 1992. Another question concerns the propositionality of appearances; one suggestion is argued for by Løkke 2008.

13 Are There Appearances Which Guarantee Their Own Truth?

a. ... [According to the Stoics], of true appearances some are gripping and others are not. The non-gripping appearances include those which occur to people in affected states [for example, the delirious and the melancholic]... A gripping appearance is one which arises from what is, shaping and impressing in accordance with the very being in a way that could not arise from what is not. For the [Stoics] are convinced that such an appearance accurately grasps the objects and skillfully shapes all their peculiar characteristics, each of which they say belong to them as an attribute. (Sextus Empiricus, *Adversus mathematicos* VII.247–248)

b. Of appearances, some are indistinct and some are intense, as is the case with perceptions as well. Shallow appearances are indistinct and have nothing gripping in them and they do not convey clearly the distinguishing features of the object of appearance; those of which the opposite is the case are intense. Such appearances are equally true and false, for being powerful is not the peculiar characteristic of true appearances, nor is being indistinct peculiar to false ones, but their distinguishing features are interchangeable. In fact, we are also accustomed to call true appearances ‘intense’ and ‘gripping’ because an assent to such an appearance is a grip, and we call ‘ungripping’ false appearances and of the true ones those which are indistinct. An appearance is called ‘evident’ when it is both true and intense (that is, a gripping one), but sometimes an intense appearance is called that to contrast it with the indistinct one. (Alexander of Aphrodisias, *De anima* 71.5–14)

c. Carneades says that he will concede the rest of it [that is, the definition of the gripping impression] to the Stoics, but not the clause ‘of such a kind as could not arise from what is not’. For impressions arise from what is not as well as from what is. The fact that they are found to be equally self-evident and striking is an indication of their indiscernibility, and an indication of their being equally self-evident and striking is the fact that consequential acts are linked to [both kinds of impression]. (Sextus Empiricus, *Adversus mathematicos* VII.402–403; LS 40H)

According to the Stoics, there are appearances which guarantee their truth and thus function as criteria of truth: these kinds of appearances are called gripping or cataleptic (*katalēptikai phantasiai*). They are such that they arise from existing objects and present them exactly as they are (a). The authors from opposing schools, such as the Aristotelian Alexander (b) and sceptic Carneades (c), typically interpreted the Stoic claim of the gripping appearances as implying that such appearances are internally discernible from those appearances which are either false or non-gripping (and as such could mislead as well as lead to truth). They criticised the Stoics precisely for this supposition and argued that forceful and seemingly self-evident appearances can nonetheless be false. However, from the Stoic point of view the criterial role of the gripping appearance does not depend on its internal discernibility from non-cataleptic appearances. Rather, what is distinctive of the gripping appearance as a criterion of truth is that, when it is assented to, we are guaranteed to possess the truth of the matter at hand. For discussions of the Stoic cataleptic appearances, see Striker 1974, Tuominen 2007a, 225–228, 233–237, Hankinson 1996, 65–76 with references to the discussion. Cf. Epicurus’ doctrine ‘every appearance (*phantasia*) is true’ (Sextus Empiricus, *Against the Professors* VII.203–204; VIII.9, cf. VIII.185; Plutarch, *Adversus Colotem* 1109a–b; Usener 1887, no. 248). For Epicurus’ doctrine, see also Striker 1977; Taylor 1980; Everson 1990a.

Chapter 8

Medieval Theories of Internal Senses

Simo Knuuttila and Pekka Kärkkäinen

Avicenna's theory of the five external and the five internal senses and his descriptions of these had a strong impact on early medieval thought. By the 'internal senses' Avicenna refers to the cognitive faculties of the sensory soul other than the external senses. The organs of the inner senses are the different ventricles of the brain in which they are located. While the acts of the inner senses are associated with changes in the fine corporeal spirit, their ultimate subject is the incorporeal soul. The *common sense* unifies the sensations of the external senses, the *imagination* retains the sensations, and a third power can create configurations by combining and dividing representations in the imagination. This latter ability is called *imaginative* in animals and *cogitative* in human beings. The fourth power, which is called *estimative*, grasps the 'intentions' of things, such as their hostility or dangerousness and other harmful and useful aspects which are not perceived by the external senses. The *memory* is a retentive power which retains the content of the estimative power (1). It has been argued that Avicenna's taxonomy of the internal senses continued the late ancient approach in which Aristotle's conception of the first sensory power was associated with new functions and divided into separate faculties. Some medieval Aristotelians wanted to correct the Avicennian classification by reducing the number of internal sense faculties (for example, Averroes and Aquinas) or by deeming the internal senses as operations of one faculty called the common sense, the fantasy, or the imagination (3).

Avicenna's theory of the internal senses was among the leading paradigms until the mid-thirteenth century, and his conception of the estimative power was discussed right through to the seventeenth century. Another influential source for

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early medieval discussions was the late ancient Platonist view, also found in Augustine, in which the imagination is treated as a central immaterial power which mediates between sense and intellect; sensory acts other than perceptions are associated with the instrumental animal spirit in various ventricles of the brain (2).

According to Avicenna, the common sense as an internal faculty contributes to perceiving by differentiating and synthesising simultaneous perceptions of several senses. Latin writers considered these operations to be the Aristotelian functions of the common sense, together with the function of perceiving that one perceives – Avicenna did not locate this ability in the common sense (4). While Avicenna regarded retaining of the representations of the common sense, on the one hand, and the handling of these representations by combining and separating them, on the other, as the functions of two separate imaginal faculties, many later Aristotelians ascribed these activities to one faculty called the imagination or fantasy. In the Augustinian tradition, the power of the soul which forms images is sometimes sense, other times imagination, depending on whether the corresponding external objects are actual. The increasing interest in counterfactual arguments added to the significance of the imagination in late medieval thought (5). Following Aristotle, many medieval thinkers assumed that whenever one thinks using universal concepts, one is simultaneously aware of the corresponding sensory forms in the imagination from which the concepts are derived. This is where the doctrine of the conversion to phantasms comes from (6). Avicenna's estimative faculty was often discussed as an instinctual power of choice in animals; following Averroes, Aquinas regarded the corresponding non-instinctual capacity of the human sensory soul as part of the sub-intellectual cogitative power which recognises concrete things as representatives of common natures or as good or evil. The conception of a sensory estimative power was often employed until the seventeenth century, but there were also critical voices since Duns Scotus's thought experiment: a lamb would flee a sheep miraculously changed to be like a wolf in all sensible accidents, which it would not do if it had an estimation of the agreeability of the object. Instead of this explanatory model, Scotus refers to law-like facts about instinctual behaviour (7). See Harvey 1975.

1 Avicenna's Classification of Internal Sense Faculties

The first among the vital powers of apprehending the hidden things is the fantasy or common sense. It is a power located in the first ventricle of the brain, receiving through itself all the forms which are imprinted in the five senses and transmitted to it.

After this there is the imagination or the formative power, which is located in the further part of the anterior ventricle, preserving the things which the common sense receives from the five senses and keeping them after the removal of those sensed objects. You should know that receiving is attributed to a power which is different

from a preserving power: think of water, which has the power to receive engravings, depictions and an entire shape, but does not have the power to preserve...

After this there is the power which is called imaginative in relation to the vital soul and cogitative in relation to the human soul; it is located in the middle ventricle of the brain where the vermiform part is located, and it combines certain things with others in the imagination and separates some things from others as it chooses.

Then there is the power of estimation, which is located at the top of the middle ventricle of the brain, apprehending the unsensed intentions which are in individual sensed objects. This is the power by which a sheep judges that the wolf is to be avoided and the lamb is to be loved...

Then there is the power of memory and recollection, which is located in the posterior ventricle of the brain, preserving what the estimative power apprehends of the unsensed intentions of the individual sensibles. The relation of the power of memory to the estimative power is similar to that of the imagination to the sense, and the former power in its relation to the intentions is similar to the latter in its relation the sensible forms. These are the powers of the vital or sensory soul. (Avicenna, *Liber de anima* 1.5, ed. van Riet, 87.19–88.28; 89.44–90.60)

Avicenna argued that there must be distinct faculties for receiving, storing, and processing the cognitive contents based on sense perception. Furthermore, he distinguished between faculties associated with sensed representations and those related to unsensed intentions. For the sources of Avicenna's classification, see Black 2000, 70–71. Avicenna's classification was repeated, for example, in Dominicus Gundissalinus, *Tractatus de anima*, 71–80; John Blund, *Tractatus de anima* 17–20 (62–71); John of la Rochelle, *Tractatus de divisione multiplici potentiarum animae* 2.1.5–10 (74–76); Peter of Spain, *Scientia libri de anima* II.5 (99–103), Albert the Great, *De homine* 35.2 (310–312), 37.1–38.1 (323–331), and also in Pseudo-Albert, *Summa naturalium* 52*–56* which became a popular brief introduction in late medieval times. For discussions of Avicenna's approach in other medieval works, see Hasse 2000, 279–287. See also **3** below.

2 Other Traditional Classifications

a. There are said to be corporeal sense, imagination, reason, intellect, and intelligence. All these are in the soul and nothing but the soul ... It perceives bodies by the senses, the likenesses of the bodies by the imagination, and the dimensions of bodies and the like by the reason, since it is about the first incorporeal object which

needs a body to exist and through it place and time. By the intellect it is carried beyond anything that is a body, belongs to a body, or is in any way corporeal ... The intelligence ... discerns that which alone is in the highest and purest manner incorporeal. (Isaac of Stella, *Epistola de anima*, PL 194, 1879d–1880c)

b. Internal sensory power is divided in two ways, either according to the three differences distinguished by Augustine and Damascene above, in the imaginative (or fantastic) power, in the excogitative (or rational) power ... and in the memorative power; or it is divided according to the five differences distinguished by Avicenna ... (John of la Rochelle, *Summa de anima* II.96 (240))

c. However, the fantastic part and the sensory part do not differ in essence but only in function or power and use, for that which is sensory in the presence of sensible things becomes fantastic or imaginative when, in the absence of sensible things, it considers the images of sensible things stored in itself and imagines absent things by means of those images. (Robert Kilwardby, *De spiritu fantastico* 2)

d. The vitalising sensory spirit is so conditioned that by its nature it can make itself similar to sensible things, preserve this similarity, and show it to itself when contemplating ... There is no desire without imagining what is desirable or to be avoided. Imagination is not possible without memory, since imagination is the contemplation of the inner image of an absent sensible thing which is represented by the memory. (Robert Kilwardby, *De spiritu fantastico* 206–207)

e. By what we have said it is proved most certainly that the spirit which is in the foremost ventricle operates the senses, that is, vision, hearing, taste, smell and touch, and with these athagil, which the Greeks call fantasy, and furthermore, that the spirit which is in the middle ventricle operates cogitation, cognition, and foresight, and the spirit which is in the posterior ventricle operates motion and memory. (Costa ben Luca, *De differentia spiritus et animae*, 275–282)

Isaac of Stella (c. 1160) presents a classification of the cognitive powers (**a**) which (with the addition of memory) was often repeated by twelfth-century authors (cf. *Liber de spiritu et anima* 4, 13 (PL 40, 782, 789), and the allegoric discussion in Richard of St. Victor's *The Twelve Patriarchs*, 3–5). The list of these powers, also found in Boethius's *Consolatio philosophiae* V.4, was taken to express the ascending order of understanding corporeal and incorporeal things – a hierarchy that was important to the followers of Augustine's theological psychology. A related list of cognitive powers lower than those of the intellect was known from Nemesius of Emesa's *De natura hominis* 5–13, and John Damascene's *De fide orthodoxa* 31–34 (124–129): sense, imagination, opinion/excogitation, memory. Opinion or excogitation involves sensory evaluation of sense-good and sense-evil (**b**). In the Augustinian tradition, the central faculty was the imagination which produces likenesses of external

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things when perceiving them, retains these in memory, and evaluates them from the point of view of sense-good and sense-evil. These were the basic cognitive activities of the sensory soul in Kilwardby's Augustinian psychology (c–d). Twelfth- and thirteenth-century authors were interested in the localisation of the cognitive powers in the different parts of the brain (e). Apart from Augustine (*De genesi ad litteram* VII.18.24) and Avicenna, the sources of this doctrine included Nemesius of Emesa, *De natura hominis* 6, 12–13, John Damascene, *De fide orthodoxa* 31–34, the *Pantegni* IV.19, and Costa ben Luca (Qusta ibn Luqa). See also p. 64 above.

3 The Number of the Internal Senses

a. But the estimation which like the common sense receives the species does not retain it. For this reason another power is required in the last part of the rear ventricle of the brain which retains the species of estimation and serves as its storage and depository, like the imagination is the storage of the common sense, and this is the power of memory. Avicenna says this in the first book of his *De anima*. The cogitation or cogitative power is in the middle ventricle, and it is the queen of sensory powers, serving as reason in animals ... But the Latin text of Aristotle does not offer us this division, for only the common sense, the imagination, and the memory are explicitly mentioned there. However, since the faulty translation makes Aristotle's text unintelligible here and almost everywhere, and since Avicenna was the perfect follower and expositor of Aristotle and the leader and prince of philosophy after him, as the Commentator said in the chapter on the rainbow, one should adhere to the teaching of Avicenna which is clear and perfect. (Roger Bacon, *Perspectiva* I.1.4–5 (14–16))

b. It should be said that if fantasy is taken in a broad sense, there will be only a slight difference between fantasy, imagination, and estimation with respect to the function, object and organ. Fantasy seems to be understood in this way by Aristotle who says that it is the power according to which a phantasm occurs to us, and that it is a motion brought about by actual sense perception, all this applying to the imagination. He also says that the fantasy is true and false, which applies to the power of combining and dividing perceived images, and he says that the fantasy moves by determining the pleasant, the sad, the harmful, and the agreeable in perceived images, which seems to apply to the estimative power. (Albert the Great, *De homine* 38.4 (334a))

c. It seems that the entire formality of the sensory power is in the fantasy... and in this way all these internal powers of the sensory soul seem to be in one common essentiality and substance. They differ from each other by their material being in the diverse parts of the brain in which these powers are organised, all of them being organic. (Albert the Great, *De anima* III.1.3 (168b))

d. Philosophers distinguish between the apprehensive powers in another way. According to them, one should say that the powers of sense, fantasy, imagination, estimation, particular opinion and memory are substantially the same and that they differ from each other only in definition. So all these powers are substantially the same as the common sense and have the same organ, but they differ in definition. (*Lectura in librum De anima*, ed. Gauthier, II.26.2 (441))

e. Aristotle clearly stated this in that work when he presented four kinds of powers which distinguish particular things: first the common sense, next the imagination, next the cogitation, and last the memory. He regarded memory as the most spiritual, then cogitation, then imagination and last the sensory powers. (Averroes, *In Aristotelis De anima* III.6 (415–416))

f. To the argument about the estimative and cogitative powers which is based on the authority of Avicenna, the Commentator, and many other commentators, it should be said that if they believed that those powers were different from the common sense, they did not believe it like Aristotle, and therefore I disagree. But if they believed that those names were not synonyms, they distinguished well, calling the same power the common sense, fantasy, and estimation. It is namely called the common sense for the same reason which I posed before that it is naturally disposed to conceive all the sensible things and the sensations of the external senses, and it is moved by those sensations of the external senses. It is called fantasy insofar as it is moved by the stored intentions to these acts of cognition and insofar as it has ceased to be moved by the external senses. It is called estimation for the additional reason that it is naturally disposed to elicit the intentions and apprehensions of non-sensible things out of these sensible things and sensations, such as those related with love and hatred, useful and harmful, agreeable and disagreeable, and with many other apprehensions upon which the motion of the sensory appetite naturally follow. The Commentator does not distinguish between the cogitative and the estimative power, except when the power associated with the aforesaid operation is called estimative in brute animals and cogitative in humans. Therefore he says that the cogitative power needs the intellect and is nobler than the estimative power. (John Buridan, *Quaestiones in De anima* II.23 (387–388))

Roger Bacon was faithful to Avicenna and asserted that Avicenna probably presented Aristotle's view of the number of the internal senses (**a**). Albert the Great's remark on the broad sense of fantasy is meant to harmonise the Avicennian classification with Aristotle's more succinct terminology. The same idea is also found in his commentary on Aristotle's *De anima*. It seems that Albert believed that all internal senses belong together because their contents are phantasms (**b–c**). The author of the anonymous *De anima* commentary suggested that there is only one internal faculty (the common sense) with

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various functions (**d**). This quotation is preceded by a medical classification of the powers having various locations in the brain. Peter John Olivi also argued that there is one inner sense with several functions (*Quaestiones in secundum librum Sententiarum*, qq. 63–66 (II, 596–606)). Peter of Spain (pseudo) did not distinguish between the common sense and the imagination. According to his view, the imagination is the central internal sensory faculty and, following Averroes, he did not mention the estimation at all (Wood 2007). Many authors followed Averroes who dropped the distinction between the retentive and the combining imagination as two separate powers (**e**); cf. Thomas Aquinas, *Summa theologiae* I.78.4: ‘Thus, therefore, the proper sense and the common sense are appointed for the reception of sensible forms ... But the fantasy or imagination is appointed for the retention or preservation of these forms, for fantasy or imagination – these are the same – is, as it were, a storehouse of forms received through the senses’. (For further examples, see Steneck 1970, 160, 170, 181, 185, 237.) Thomas Aquinas also dropped Avicenna’s estimative power from human psychology. (See **7** below.) According to Buridan, it is not necessary to posit distinct faculties for these functions other than memory, there being only two internal senses, one for actively processing representations and another for storing contents (**f**). For memory, see Buridan, *Quaestiones in De anima* II.23 (380–382); for the organs of the internal senses, see II.24 (408). Peter of Ailly considered the standard Avicennian view as presented in the *Summa naturalium* (see **1** above) more plausible than Buridan’s division, but he shared the view of many Latin authors that memory stores not only intentions, as in Avicenna, but also the sensible species of externally perceptible qualities (*Tractatus de anima*, 4.6 (29)). For the sensory memory, see for example Thomas Aquinas, *In Aristotelis De memoria et reminiscencia* 3, 345–347.

4 The Functions of the Common Sense

a. The common sense has three or four acts for it sometimes converts itself to the acts of an external sense ... and it distinguishes between the sensible objects of particular senses ... The third act, according to Avicenna, is to apprehend an object in a place where it is not and in a place where it is as if the same thing were in different places ... The fourth act, according some people, is to apprehend common sensibles. (Anonymous, *De anima et de potentiis eius*, ed. Gauthier (44.334–346))

b. I respond in agreement with the Philosopher that there are two ways of investigating the necessity of the common sense, that is, by means of the two aforementioned operations, and it is possible to establish the reasons in this way. The first is

as follows: since the proper principles of the operations of the soul are potencies, all operations of the soul are necessarily reduced to potencies. Conceiving the difference between white and sweet is an operation of the soul, yet this is not reducible to the intellective potency, which merely judges intelligible things and their differences as far as they are intelligible. The difference between white and sweet is conceived by the soul not merely as these differ in their quiddities, which pertain to the intellect, but also as they differ as sensory objects ... therefore, conceiving this difference belongs to the sensory soul. But this does not belong to a particular sense, for a sensory power can conceive a difference between things only by first conceiving both separately according to natural priority, and no particular sense conceives things which are sensed by another sense, only those proper to it, and no difference between these ...

The second way is as follows: We sensorily experience that we sense. Likewise, this is proved by reason. When there is an effect, there is a cause, but, according to Avicenna, the perception of the union with what is agreeable is the cause of pleasure, yet pleasure is included in the act of sensing both in us and in animals. Therefore, the perception of the act of sensing of what is agreeable is present both in us and in animals. It is evident, however, that an animal does not perceive its sensing other than by means of a sense, since it has no intellect. Therefore, it does this by means of another sensory potency and not by means of some particular sense. (John Duns Scotus, *Quaestiones super Secundum et Tertium de Anima* 9 (71–72))

c. But if you wish to know the difference between the operation of the external senses, the operation of the common sense, and the operation of the formative power, take a look at the disposition of a drop of rain. You will see a straight line. Then take a look at the disposition of something straight, the top of which is moved in a circle. You will see a circle. Yet it is impossible that you apprehend the thing itself as a line or a circle unless you look at it a number of times. But it is impossible for the external sense to see it twice, for it only sees it where it is. However, when it is described in the common sense and removed before the form in the common sense is destroyed, the external sense apprehends it where it is, and the common sense apprehends it as if it were there where it was and as if it were there where it is, and it sees a circular or straight distension. It is impossible to attribute this to the external sense in any way; instead, the formative power apprehends these two and forms them inasmuch as the thing which has already moved on is destroyed. (Avicenna, *Liber de anima* I.5 (88–89)).

The common sense was closely associated with the external senses; it was counted as an internal sense because it did not have an external sense organ, and its operations presupposed the acts of the external senses. Apart from Avicenna, the main source for the medieval conception of the common sense was Aristotle's *De anima* III.2, 426b8–427a15, which was taken to be about

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the common sense. The anonymous text (**a**), written c. 1225, refers to the most usual medieval functions of the common sense, namely, the perception of perception and the discernment of various sensible qualities. Scotus's text is a standard later example of these functions (**b**). For the awareness of perception, see above p. 66. As for the discernment between the sensations of the various senses, Scotus mentions the usual example of the ability to distinguish between white and sweet; see also the anonymous works *Lectura in librum De anima*, ed. Gauthier, II.25 (418–419); *Quaestiones in De anima*, ed. Bazán 1971, II.39 (463); John Buridan, *Quaestiones in De anima* II.22 (368). The third function mentioned in **a** refers to Avicenna's attempt to explain the perception of movement by the common sense in terms of the power of combining an actual perception of what moves to the earlier perceptions of the same object stored in the imagination (**c**). The fourth function in **a** refers to Averroes's not very influential view that the Aristotelian common sensibles are the proper objects of the common sense; see above p. 65.

5 Imagination and Fantasy

a. Insofar as it apprehends all these [objects of sense] and judges them, it is called the common sense; insofar as it retains and conserves these received forms it is called fantasy, and insofar as it later turns itself to these and considers them as images, it is called imagination ... It should be noticed that imagination produces new compositions which are not produced by things – this is why people imagine chimeras and goat-stags even though compositions of this sort never occur in the senses. However, their parts occur in the senses as the parts out of which a chimera is composed; the composition is formed or made by the imagination itself. (Anonymous, *Lectura in librum De anima*, ed. Gauthier, II.26.2 (441–443))

b. [The images] are acquired by the imaginative spirit as follows: the sensory spirit acquires them and retains them, and after the ending of the act of sensing it passes them on to the imagination. And one should not think that the image acquired by the sensory spirit gives birth to the image by itself in the imagination, but rather that the image acquired in sensing produces a sensation in the presence of the sensible thing, and thereafter it produces an imaginative act in the absence of that same sensible thing. (Robert Kilwardby, *De spiritu fantastico* 143)

c. Augustine responds in a famous letter, saying that there is an innate power of the soul to diminish, increase, change, and compose, and that by means of this power the soul forms images of things which are not seen from images imported by the sense. Since you have seen a human being and a horse, you can form by imagination an image which is like a human in front and like a horse at the back, though you

have never seen such an animal. Moreover, if you have never seen the sea, you can form for yourself an image of the sea from seeing a vessel or pond of water, and similarly in other cases you can form images of unseen things through that power to increase and diminish in the soul. Images of this kind arise from images which are formed by the senses by imitating those images in whole or in part. If nothing similar was apprehended by the sense, it cannot be imagined. (Robert Kilwardby, *De spiritu fantastico* 24)

d. Imagining can be understood in many ways. In one sense it means the same as representing in the mind, and in this sense not only true but also impossible and contradictory contents can be imagined since this is just to form a proposition in the mind. In another sense, it means to form a proposition in the mind with the appearance that things are a certain way or that their being so would not be repugnant, and many people say that in this sense we cannot imagine impossible things. (Peter of Ailly, *Quaestiones super libros Sententiarum* I.5 (i3ra–b))

The anonymous author (c. 1245) who argued for one inner sense with several functions (see **3c**) separates retaining a representation (*phantasia*) from producing combinations of representations (*imaginatio*) (**a**). Albert the Great calls the former function imagination and the latter fantasy, although he argued that in Aristotle fantasy is also a common name for all the inner senses except memory (**3b**). In the first Latin translation of Aristotle's *De anima*, *phantasia* was sometimes rendered *imaginatio* and sometimes *phantasia*, contributing to terminological uncertainty. Some later authors, such as Aquinas, use these terms as synonyms (see the comment on **3d**). Avicenna calls the imaginative power 'imaginative' in animals and 'cogitative' in humans. Aquinas thinks that animals do not have a combining imaginative power. The retentive and combinative functions belong to the imagination in human beings – the cogitative power in Aquinas is the particular reason. (See **7** below.) Kilwardby describes the Augustinian view according to which the soul's power of forming images of external things is regarded as sensation when the external objects are actual and as imagination when the images are in the soul without the external objects being actual, and he also describes Augustine's influential view of imagining non-existent things (**b–c**). (Cf. Augustine, *Letters* 7.3; the anonymous twelfth-century *Liber de spiritu et anima* 11, PL 40, 786.) Peter of Ailly's remarks on the imagination are associated with the late medieval interest in counterfactual reasoning and thought experiments in which things were discussed *secundum imaginationem*. The imagination is here understood as thinking about non-existent objects, the elements of which are not repugnant. He also explains in what sense one may imagine impossible things (**d**). See also Adam Wodeham, *Tractatus de indivisibilibus* 2.3.25–26, ed. Wood, 159. For these discussions, see Dewender 2006.

6 Turning to Phantasms

I answer that in the present state of life, in which our intellect is united to a passible body, it cannot understand anything actually unless it turns to the phantasms. And of this, there are two indications. First, the intellect, being a power that does not make use of a corporeal organ, would in no way be hindered in its act through the lesion of a corporeal organ if its act did not require the act of some power that does make use of a corporeal organ. Now sense, imagination and the other powers that belong to the sensory part make use of a corporeal organ. Therefore it is clear that for the intellect to understand actually, not only when it acquires new knowledge, but also when it uses already acquired knowledge, there is a need for the act of the imagination and of the other powers. For when the act of the imagination is hindered by a lesion of the corporeal organ, as in frenetic people, or when the act of memory is hindered, as in lethargic people, we see that humans are hindered from actually understanding things of which they had a previous knowledge. Secondly, as anyone can experience in oneself, when trying to understand something one forms certain phantasms as examples through which one, as it were, examines what one is striving to understand. It is for this reason that, when we wish to make someone understand something, we lay examples before them from which they can form phantasms for understanding. (Thomas Aquinas, *Summa theologiae*, I.84.7)

b. Therefore, it is obvious that the phantasm, that is, the actual apprehension, stands to the intellection in the same way that the species caused by an object in the sense organ was said to stand to the sensation. This is how I understand Aristotle's remark: 'phantasms are like sensibles to the intellective soul', because the soul does not understand at all without a phantasm. For just as an external sense cannot form a sensation without a sensible species caused by an object in the sense organ, the intellect cannot form an intellection without the aforesaid phantasm. Hence, it is obvious what is the intelligible species in the mind, which serves the intellect, and where it is subjectively received: in the composite of the soul and the body belonging to the cogitative power. (John Buridan, *Quaestiones in De anima* III.15 (169))

According to Thomas Aquinas, the agent intellect abstracts non-complex universal concepts from the sensible species (phantasm) in the sensory soul, and whenever it uses these universal concepts as signifying, it is simultaneously aware of the phantasms (**a**). This view is based on Aristotle's remarks in *De anima* III, see p. 123 above. The idea that the use of concepts is associated with concrete images is usual in medieval thought, regardless of how other psychological aspects of conceptual activity are interpreted. For similar views, see also John Duns Scotus, *Ordinatio* I.3.3.1, n. 392 (ed. Vat. 3, 239) and William of Ockham, *Quaestiones in II Sententiarum* 12–13 (OTh 5, 302).

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While Aquinas thinks that the active intellect produces the intelligible species which then activate the passive intellect, Buridan regards the phantasm as the intelligible species which makes the intellect able to actualise itself with respect to intelligibility, in the same way as the sensory faculty actualises itself when the sensory species is present (*Quaestiones in De anima* II.10, 160–1; III.15, 164, 168). Aquinas considered it possible for the human intellect in heaven to understand without phantasms. During late medieval period, some authors, such as Heymeric van de Velde, found this possible in this life as well, without the aid of supernatural grace. Heymeric grounded his view on the authority of earlier writers such as Albert the Great and Ulrich of Strasbourg (Heymeric van de Velde, *Reparationes librorum totius naturalis philosophiae* (Cologne 1494), Z1r; *Problemata inter Albertum Magnum et Sanctum Thomam ad utriusque opinionis intelligentiam multum conferentia* (Cologne 1496), 13, 43r–43v). On the development of this tradition, see Hoenen 1993 and 1995.

7 Estimation and Cogitation

a. By ‘intention’ the commentator [Avicenna] means a singular quality which is not sensed and which is either harmful or helpful. Harmful is, for example, the property in the wolf on account of which the sheep flees the wolf, and good is the property in the sheep on account of which the lamb approaches it. (John Blund, *Tractatus de anima* 19 (69))

b. This power is called estimative because it estimates things which are perceived or imagined as either good or as bad. This is followed by desire or flight, or by fright or not being frightened, which are followed by fear or courage. Both the estimative power and fantasy move the appetite, but fantasy moves by means of the forms which are simply received from the senses, whereas estimation moves by means of these as well as others which are innate. (Anonymous, *De potentiis animae et obiectis*, ed. Callus (155))

c. The estimative power and fantasy operate in the same organ and estimation is nothing but an extension of fantasy into practice, like the speculative intellect, when it extends itself, is practical intellect. (Albert the Great, *De homine* 39.3 (339a))

d. Furthermore, the estimative power is appointed for the apprehension of intentions which are not received through the senses, and the memorative power, which is a storehouse of such intentions, is for the preservation of these. We have a sign of this in the fact that the principle of memory in animals concerns this sort of intention, for instance, that something is harmful or agreeable. And the very nature of the past to which the memory attends is reckoned among these intentions.

It should be noted that there is no difference regarding sensory forms between humans and other animals; for they are similarly transmuted by exterior sense objects. But there is a difference with regard to the aforementioned intentions, for other animals perceive the intentions of this sort only by some natural instinct, whereas humans perceive them through a kind of consideration. Therefore the power which is called the natural estimative power in other animals is called the cogitative power in humans – this latter power discovers these intentions through a sort of consideration, which is why it is also called particular reason. To this physicians assign a determinate organ, namely, the middle part of the head, for it considers individual intentions just as intellectual reason considers universal intentions. As to the memorative power, humans have not only memory, as other animals have in the sudden remembrance of the past, but also reminiscence, which, as it were, syllogistically seeks for a recollection of the past by individual intentions. (Thomas Aquinas, *Summa theologiae* I.78.4)

e. If, however, there is an apprehension of something as a singular thing (as, for example, when I see something coloured, I perceive this human being or this animal), such an apprehension in human beings takes place in the cogitative power. This is also called particular reason inasmuch as it deals with individual intentions in the way that universal reason deals with universal notion. Nevertheless, this power is in the sensory part, for the sensory power, at its highest level, participates to some extent in the intellective power of a human being, in whom sense is conjoined to the intellect. In an irrational animal, however, the apprehension of an individual intention takes place through the natural estimative power. By means of this power a sheep, through what it hears or sees, recognises its offspring or something like this.

The cogitative and estimative powers are different in this respect, for the cogitative power apprehends an individual under a common nature. This is possible because it is united to the intellect in the same subject. Thus, it knows this human being as this human being, and this piece of wood as this piece of wood. But the estimative power does not apprehend an individual as being under a common nature, but only as being the end point or starting point of some action or passion. So the sheep knows the lamb, not as this lamb, but as something which it can nurse, and it knows this grass as its food. Thus its natural estimative power does not at all apprehend individuals to which its action or passion does not extend, for the natural estimative power is given to animals to direct them toward the proper actions or passions which should be pursued or avoided. (Thomas Aquinas, *Sentencia libri De anima* II.13 (121–122))

f. For when a sheep estimates that a wolf is hostile to it, it must apprehend the thing which it judges to be hostile to it, for to apprehend only the hostility is not to apprehend that the wolf is hostile to it. Besides these two things, it is further required that the sheep simultaneously apprehends itself as the end of the hostile relation ... when the sheep estimates and judges that the wolf, which it sees or hears to be present, is hostile to it, then the act and its power apprehend the form of the wolf as the subject of the hostility by way of the common sense. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 64 (II, 603–604))

g. For if a sheep, while retaining its nature and its natural affection towards a lamb, were miraculously changed so as to be like a wolf in all sensible accidents, such as colour, figure, voice and all the rest, the lamb would flee from this changed sheep just as it flees from a wolf, but still there would be no harmful intention in the sheep, only an agreeable one. Therefore the estimative power of the lamb would not dig beneath the sensible forms to find the agreeable intention, but rather it would move according to its sensitive desire in the way the sensible accidents move it. If you say that the agreeable intention does not multiply itself because such accidents are not suitable to such an intention and the agreeable intention is not multiplied without suitable accidents, this is irrelevant, for if the lamb flees from a wolf because it perceives a harmful intention by the estimative power, and the intention is not multiplied with these sensible accidents because it does not exist with these, then the lamb unearths a harmful intention which does not exist, or if it does not flee because of unearthing an intention in this case, neither does it flee for this reason in other cases. (John Duns Scotus, *Ordinatio* I.3.1.1–2, n. 62 (ed. Vat. 3, 43–44))

h. According to many authors, the sense composes and divides by means of the estimative faculty, and according to some it even produces species of unperceived things, that is, it forms a cognition which represents the thing under a circumstance which the external sense does not perceive. Such is the circumstance of being harmful or hostile perceived by the sheep when it sees the wolf and is made to flee. However, it is unnecessary to posit this kind of cognition, as Ockham proves in dist. 3 q. 2. (Gabriel Biel, *Collectorium in quattuor libros Sententiarum* I.3.6 (231–232))

Avicenna calls the agreeable or disagreeable aspects of things intentions – the immediate sensory awareness of these may cause affections and behavioral changes in the subject. These intentions, which are not perceived by the external senses, are grasped by the estimative power, which functions instinctively or on the basis of earlier experience (*De anima* I.5 (89); II.2 (118–119); IV.1 (6); IV.3 (37); Algazel, *Metaphysica* II.4.4 (170)). John Blund was one of the early thirteenth-century writers to follow Avicenna (**a**); see also the anonymous text from the 1230s (**b**) and further examples in John of la Rochelle, *Tractatus* II.9 (76); II.35 (110); *Sententia super II et III De anima*, ed. Bazán, II.27 (361); Peter of Spain, *Scientia de anima* VII.4 (266, 367). In *De homine*, Albert the Great considered the relation between compositive imagination and estimation analogous to that between speculative and practical intellects (**c**). See also Albert, *De homine*, 39.1 (337a). This idea led Albert to classify estimation under motive powers in *De anima* (III.1.2, 167b). On Albert's view, see Black 2000. Aquinas thought that the estimative power belongs to animals other than humans who understand intentions by means of the particular reason, i.e., the cogitative power of the sensory soul (**d**). This view is roughly the same as that of Averroes.

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Peter John Olivi stresses that the object of estimation is what is good or bad to the subject. He thinks that the estimative act is an awareness of the relation (*respectus*) between the object and the subject (**e**; see also Toivanen 2007). In his interpretation of the same example, Scotus questions the existence of the Avicennian estimative power by an influential counterfactual example. By his view, animal behaviour is sufficiently explained by instinctual or learned reactions to objects which have certain sensible properties. According to Scotus, the agreeability, disagreeability, and offensiveness which are said to activate the sensitive moving powers are relations between these powers and their activators. They are not intentions in the objects, and there is no external or internal sensory power which would perceive these or the relations just mentioned. The fact that animals react to certain objects in a certain way is merely a law-like fact of nature which is based on instincts (*Ordinatio* III.15.7–9). William of Ockham and Gabriel Biel also consider separate estimative cognitions as superfluous (**h**); see William Ockham, *Scriptum in I Sententiarum* 3.2 (OTh 2, 410–411). According to Buridan, the common sense as an estimative power grasps non-sensible Avicennian intentions; *Quaestiones in De anima* II.23 (388); see also Peter of Ailly, *Tractatus de anima*, 4.4 (27–28).

Chapter 9

Renaissance Theories of Internal Senses

Lorenzo Casini

The standard Renaissance accounts of the internal senses often followed medieval sources, such as Albert the Great's *De homine* and the anonymous *Summa naturalium*, maintaining that there are five internal senses: common sense and imagination, which are located in the front ventricle of the brain; fantasy and the estimative power in the middle ventricle; and memory in the posterior one. According to these accounts, common sense has a variety of functions, such as comparing between the objects of different senses and the consciousness of perception. Imagination is the faculty which retains the sensible forms received by common sense. Fantasy or the cognitive power, as it was sometimes called, is the faculty which composes and divides sensible forms and intentions, yielding new images. Intentions are evaluative features that the estimative power elicits from the sensible forms. The estimative power also provides a kind of judgement on the level of sense cognition and accounts thereby for instinctive reactions of avoidance or trust. Memory is the faculty which retains sensible forms and intentions. It differs from imagination because it retains sensible forms with knowledge of the past.

There were, however, disagreements about whether there are four internal senses, as Averroes maintained, or five, as claimed by Avicenna, as well as about whether the internal senses are located in the brain, as claimed by Galen, or in the heart, as Aristotle maintained. There were also authors who rejected the localisation of the internal senses in separate ventricles, maintaining that the brain works as a unit. Another major trend in Renaissance philosophical discussions of the faculties of the soul was the tendency to simplify psychological theories by eliminating or reinterpreting traditional explanatory models. In the case of the doctrine of the internal senses, some authors tended to either conflate them into a single function, usually called imagination, or reject those not attested by Aristotle (1).

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Imagination was considered, in terms of faculty psychology, as an inner function of the apprehensive power of the sensory soul and, by extension, the faculty of the soul which mediates between sensation and reason. The fact that imagination transmits sense data from sense perception to the mind suggests that it is closer to the body than to the immaterial mind, but since the mind makes use of these images, it was generally agreed upon that imagination takes an intermediary position; because of this, imagination inevitably became a subject for philosophical discussions about the relation between soul and body. While the traditional cognitive function of providing phantasms for intellection was often discussed, the imagination was increasingly treated as an active power which combines and divides sensory forms. This was regarded as an important and useful ability in poetry and rhetoric, but also potentially harmful if not guided by reason. Therefore, uncontrolled imagination can become a dangerous power that distorts our perception of the world and leads us astray (2).

Moreover, since imagination was regarded as closer to matter than the higher faculties of will and intellect, and therefore as more sensitive to influences that act directly on matter but not on the soul, imagination was often conceived as a power that can affect one's own body or even the body of other people, as in the case of fascination. According to this view, for which Renaissance authors found support in Avicenna and other Arabic sources, imagination can cause and cure illnesses; it can transmit, through bodily vapours, strong emotions like rage and bliss from one person to another, and it can even effect material changes in that way. Among Renaissance theorists, for example, it was common to explain monstrous progeny as the result of the mother's imagination and the contemplation of images at the time of conception or during pregnancy. Stories of monstrosities caused by a disorder of the maternal imagination were extremely popular (3).

1 Classification and Localisation of the Internal Senses

a. There are five internal senses: common sense, imagination, the estimative power, fantasy (which sometimes also is called imagination), and memory. Their organs in the substance of the brain are separated by very fine membranes and three ventricles can be discerned. The anterior and middle ventricles, which are the largest, are divided in two parts. The first part of the anterior ventricle is the organ of the common sense, and the second part, of imagination. The first part of the middle ventricle is assigned to the estimative power, and the second to fantasy. The posterior ventricle is given entirely over to memory. (Gregor Reisch, *Margarita philosophica*, X.2.21)

b. As in nutrition, where we discern different faculties responsible for the reception, preservation, digestion and distribution of nourishment, there is in the human and animal soul one function which receives the images imprinted by the senses and is therefore called imagination; one which contains them, which is memory; one which elaborates them, which is fantasy; and one which hands them on to assent or dissent, which is the estimative power. ...

The activity of imagination in the soul is analogous to that of the eyes in the body: it is as the opening of a receptacle, which is memory. Fantasy conjoins and separates those things which imagination has received as single and simple. I do not ignore that many confuse these two activities, i.e., they call imagination fantasy and vice versa, and some believe that they are the same function. To us it seems more appropriate to our aim and more suitable to instruction to distinguish them. Since we discern their distinct operations, they are to be regarded as different faculties. But it is not a serious inconvenience to use these two terms interchangeably. Then there is the sense which Aristotle calls common, with which absent objects are judged and those things that belong to several senses are distinguished; this can be accomplished by imagination, as well as by fantasy. Fantasy is marvellously free and disengaged. It invents, reproduces, combines and dissolves everything it wishes. It conjoins the most distant things, and separates the most united. Therefore, if it is not controlled and bridled by reason, it shakes up and disturbs the mind as a storm stirs up the sea. ...

The estimative faculty is that which makes the power of judgement spring forth from sensible species. Judgement tends to establish what is beneficial and harmful; for the sake of well-being nature provides sensible cognition as well as its own impulse. So it is first judged how a thing is when evaluated in itself, and thereafter to what extent it is beneficial or harmful. In the first assessment, the soul follows the senses, as sight for example; in the second, it is moved by a hidden natural impulse and dragged with force, as when the sheep avoids the wolf, even if it has never seen one before ...

To these faculties nature has assigned different instruments and different workshops in the parts of the brain. They say that in the front of the brain is the seat and source of sensation and that is where imagination is produced; fantasy and the estimative power are in the middle part, and memory in the back. (Juan Luis Vives, *De anima et vita* I.10 (*Opera omnia* III, 327–328))

c. This is not the place to discuss a question which has vexed many, namely, whether imagination is different from memory, the common sense, and the estimative or cogitative faculty, as Thomas and the Latin interpreters of Aristotle have declared, or if there is only one single power of the sensitive soul, which, in accordance with its diversity of functions, is sometimes called the common sense, sometimes the imaginative faculty, sometimes memory, as others, in particular Alexander of Aphrodisias, in the treatise *De anima* ... and Themistius, in his books *De memoria* and *De insomniis*, would have it.

We must leave out the question, which has also tormented many, of the place and seat of the imaginative power. Aristotle located it in the heart, and Galen in the brain, and the Arab Averroes, taking a middle position, asserted that the imaginative power moves from the castle of the heart, and goes up to the stronghold of the head, where it finds its seat and dwelling-place. (Gianfrancesco Pico della Mirandola, *De imaginatione*, ed. Caplan, 34–36)

d. The sensitive soul, which is between the vegetative and the intellective, is divided in two parts: the five external senses and the internal senses, which serve our soul

receiving the images of objects and presenting them to the intellect. These are four, although Aristotle does not mention more than three explicitly: common sense, fantasy or imagination, the cogitative power and memory. These four powers or faculties, which in fact are just one and cannot be distinguished except by thought, are located in the heart, according to Aristotle, but not according to Galen, who followed Hippocrates and Plato.

The function of common sense, which is like the centre of a circle, is to apprehend and distinguish the difference between different sensibles, such as colours and tastes. To distinguish between sweet and white, for example, is an operation of common sense, by means of which we also perceive that we perceive, so that when we see or hear we also know that we see or hear. Common sense only works when the sensible object is present. [...] Common sense has its own seat and is located, according to the physicians, in the first part of the brain.

Fantasy or imagination has the same function of common sense. Unlike the latter, which functions only when the objects are present, it functions when they are absent or distant, as can be seen when we dream or make up all kind of things. This function, which composes, divides and discurs, is located in the second part of the brain, which is in the middle.

The faculty of the cogitative power, which in animals is called estimative, is to know what is useful and good or harmful and dangerous ... It is located in the middle of the brain together with imagination. (Benedetto Varchi, 'Sul verbo *Farneticare*', *Opere* II, 744)

e. *Phantasie*, or Imagination, which some call *Æstivative*, or *Cogitative* (confirmed, saith *Fernelius*, by frequent meditation) is an inner sense, which doth more fully examine the species perceived by common sense, of things present or absent, and keeps them longer, recalling them to mind againe, or making new of his owne. (Robert Burton, *The Anatomy of Melancholy* I.1.2.7)

f. From that which takes place in a clear and obvious way in the external senses, we can infer the activity of the internal senses. With this power of the animal soul we understand, imagine and remember. But if it is true that every operation requires a particular instrument, then it is necessary that there is in the brain an organ for understanding, one for imagination, and yet another for memory. For if the whole brain was organised in the same way, then it would be entirely devoted to either memory, understanding, or imagination. We see, however, that it has different operations and we must therefore conclude that it has different instruments. But if we open the skull and perform an anatomical dissection of the brain, we see that it is entirely composed in the same manner by a homogenous substance, without any heterogenous parts. There are only four small cavities, which, on close inspection, have the same composition and size, and differ in no respect ... Now, the difficulty is to know in which of these ventricles understanding is located, in which memory, and in which imagination; for these powers are so close and united that there is no evidence by means of which they can be distinguished or discerned. If we consider that understanding cannot function without the images presented to it by memory, nor can memory work without the assistance of imagination, we can easily understand

that these three potencies are united in every ventricle, and that there is not one assigned to understanding, another to memory, and a third to imagination, as the vulgar philosophers have thought. (Juan Huarte de San Juan, *Examen de ingenios para las ciencias* (321–325))

g. Imagination originates from heat, which is the third quality, since in the brain there is no other rational faculty or quality from which it could derive. The disciplines which pertain to imagination are others than those which belong to understanding and memory; since frenzy, mania and melancholy are hot affections of the brain, they can be considered as evidence in order to prove that imagination consists in heat. (Juan Huarte de San Juan, *Examen de ingenios para las ciencias* (340))

Reisch's *Margarita philosophica* was a popular source for standard medieval views. His classification of the internal senses follows the Avicennian division which was one of the Latin medieval taxonomies (**a**). See pp. 132–133 above. Vives describes the functions of the inner senses in a traditional way in his *De anima et vita* (**b**). While associating the functions of the common sense with the faculties of imagination and fantasy in the text quoted above, he also treats the common sense as a separate faculty elsewhere (III, 390 and 394–396). The traditional functions are also described, for example, by Benedetto Varchi in 1858–1859 (**d**) and mentioned by Robert Burton in 1621 (**e**). Many authors were inclined to see the internal senses as the functions of one power of the sensory soul (**c**, **d**), whether located in the brain ventricles (**b**) or simply in the brain, as did Juan Huarte de San Juan, who was sceptical about the traditional localisation theory (**f**). The Aristotelian heart-centered view was often mentioned but hardly supported (**c**, **d**). In physiological accounts based on the medical theory of humours, imagination could be characterised by the quality of hotness and associated with reprehensible conditions of the mind, such as frenzy and mania (**g**). For the tendency to either conflate the internal senses into a single function, usually called imagination, or at least reject those not attested by Aristotle, see also Niccoló Tignosi, *In libros Aristotelis de anima commentarii* (Florence, 1551), 325; Francesco Piccolomini, *Libri ad scientiam de natura attinentium* (Venice, 1600), 51f.; Francisco Suárez in his *De anima* (III.30). See Park 1988; Casini 2006.

2 Imagination as a Representative Power

a. Although imagination differs from the powers of the soul mentioned above [i.e., sense, opinion, reason, and intellection], the difference is not so great that imagination does not have any communication with them. It is rather so close to them that philosophers of good reputation have, due to this affinity, often confused

it with some other power. Imagination is located on the border between intellect and sense, and its place is between these two. It follows sense, by whose act it is brought forth, and foregoes intellection. It corresponds to sense because, like it, it perceives the particular, corporeal, and present. It surpasses sense, because it generates images without any external impulse, not only of the present, but also of the past and the future, and even of such things that cannot be brought to light by nature. It conforms with sense, because it makes use of sensible forms as objects. It is superior to sense, since it alternately separates and combines at will those forms which sense, upon ceasing to function, has abandoned; this is something which sense cannot do.

It is in accordance with the intellect, in being free, unfixed, and devoted to no special object. But the intellect is superior to it, since imagination conceives and reproduces the sensible and particular only, while the intellect, in addition, conceives and reproduces the universal and intelligible, and such things that are not affected by contact with matter.

Moreover, imagination associates with all the superior powers, since they would not succeed in that function which nature has given each of them unless imagination helped and supported them. Nor could the soul, tied as it is to the body, think, know, or comprehend at all, if fantasy did not continually provide it with images ...

Therefore, we must consider imagination as having been given to man, not at random, but most prudently. Man consists of and is, so to speak, composed of the rational soul and the body, and since the spiritual substance of the soul is very different from the earthly mass of the body, the extremities were conjoined by an adequate mean, which in some way shares the nature of each, and through which the soul, even when united to the body, carries out its own functions. (Gianfrancesco Pico della Mirandola, *De imaginatione*, ed. Caplan (30, 32, 40))

b. From a good imagination all those arts and sciences which are based on figure, correspondence, harmony and proportion are born. These are: poetry, eloquence, music, the capacity of preaching, practical medicine, mathematics, astrology, the ability to govern a republic, military art, painting, drawing, writing, reading, being a pleasant, witty, neat and acute man in practical matters, all those machines and devices which are invented by artificers, as well as those capacities which impress people, such as simultaneously dictating to four scribes different arguments and managing them to become well-ordered. (Juan Huarte de San Juan, *Examen de ingenios para las ciencias* (395–396))

c. Poesy is a part of learning in measure of words for the most part restrained, but in all other points extremely licensed, and doth truly refer to Imagination; which, being not tied to the laws of matter, may at pleasure join that which nature hath severed, and sever that which nature hath joined, and so make unlawful matches and divorces of things. (Francis Bacon, *The Advancement of Learning* II.4.1)

d. Invention is an instrument of the imagination used to conceive things, which is put to our use. It is diffused throughout the poem as blood through the animal body; one may therefore call it the life or the soul of the poem (Jacques Peletier, *Art poétique* I.4)

e. Invention is nothing other than the proper natural working of the imagination which conceives the ideas and forms of everything that can be imagined, heavenly as well as earthly, animate or inanimate, in order afterwards to represent, describe, and imitate them. For just as the purpose of the orator is to persuade, that of the poet is to imitate, invent, and represent the things which exist or which may exist, that is, the verisimilar. One cannot doubt that after subjects have been well and boldly invented, a fine arrangement follows, since the arrangement follows the invention, the mother of everything, as a shadow follows the body. (Pierre de Ronsard, *Abbrégé de l'art poetique François* (1566, 5v))

f. Invention, which is nothing other than an imagination of things that are either true or verisimilar, or we might say possible, is the main pillar of the great machine of imitation, and the base and foundation of the whole poetic art, since it is concerned with those same three objects upon which imitation, as if upon its proper seat, rests, that is, imitating nature, or art, or chance. (Pietro Cresci, *Discorso sopra un sonetto in lode del celebre luogo di Valchiusa* (1599, B5))

g. Neither is the Imagination simply and only a messenger; but it is invested with, or at leastwise usurpeth no small authority in itself, besides the duty of the message. For it was well said by Aristotle, *That the mind hath over the body that commandment, which the lord hath over a bondman; but that reason hath over the imagination that commandment which a magistrate hath over a free citizen; who may come also to rule in his turn.* (Francis Bacon, *The Advancement of Learning* II.12.1)

h. Again, if the affections in themselves were pliant and obedient to reason, it were true there should be no great use of persuasions and insinuations to the will, more than of naked proposition and proofs; but in regard of the continual mutinies and seditions of the affections ... reason would become captive and servile, if eloquence of persuasions did not practice and win the imagination from the affections' part, and contract a confederacy between the reason and imagination against the affections; for the affections themselves carry ever an appetite to good, as reason doth. The difference is, that the affection beholdeth merely present, reason beholdeth the future and sum of time. And therefore the present filling the imagination more, reason is commonly vanquished; but after the force of eloquence and persuasion hath made things future and remote appear as present, then upon the revolt of the imagination reason prevaieth. (Bacon, *The Advancement of Learning* II.18.4)

i. What Imagination is, I have sufficiently declared in my *Digression of the Anatomie of the Soule*. I will only now point at the wonderfull effects and power of it; which, as it is eminent in all, so most especially it rageth in melancholy persons, in keeping the species of objects so long, mistaking, amplifying them by continuall and strong meditation, untill at length it produceth in some parties reall effects, causeth this and many other maladies. And although this *Phantasie* of ours, be a subordinate facultie to reason, and should bee ruled by it, yet in many men, through inward or outward distemperatures, defect of Organs, which are unapt or hindered, or otherwise contaminated, it is likewise unapt, hindered, and hurt. This we see verified in sleepers, which by reason of humours, and concourse of vapours troubling the

Phantasie, imagine many times absurd and prodigious things, and in such as are troubled in *Incubus*, or Witch ridden (as we call it) if they lie on their backs, they suppose an old woman rides; & sits so hard upon them, that they are almost stifled for want of breath; when there is nothing offends, but a concourse of bad humours, which troubles the *Phantasie*. This is likewise evident in such as walke in the night in their sleepe and doe strange feats: these vapours move the *Phantasie*, the *Phantasie* the *Appetite*, which moving the *animall* spirits, causeth the body to walke up and downe, as if they were awake. (Robert Burton, *The Anatomy of Melancholy* I.2.3.2)

According to Gianfrancesco Pico della Mirandola, imagination is an intermediary between the soul and the body and its images are necessary for the cognitive acts of the rational soul (a). This was a usual position among Renaissance thinkers, although there were various views about the co-operation between the intellect and imagination (see Spruit 1995). Some authors related mental faculties with areas of knowledge. Imagination was often linked with disciplines such as poetry, music and painting (b–c). For Francis Bacon’s view on the role of imagination in the process of scientific inquiry, see Park 1984. In Renaissance poetical theory, the term ‘imagination’ was rarely used in connection with the creative process of writing poetry in order to avoid associations with madness and frenzy. The term ‘invention’ was often preferred, and its meaning shifted from the traditional rhetorical sense of ‘choosing the matter of discourse’ to a sense closer to the modern idea of ‘creative imagination’. Sometimes the concepts of imagination and invention were mentioned together (d–f). See Cocking 1991, ch. 9 and 10. Referring to the acts of imagination in emotions, Bacon argued that rhetoric can be helpful in mastering desires (h). In his quotation from Aristotle (*Politics* 1254b2–6) the term ‘appetite’ (*orexis*) is mistakenly rendered by imagination – an understandable mistake because the imagination derived its behavioural power from being the cognitive aspect of emotions (g). The idea of keeping imagination under the control of reason was not unusual; for example, Francesco Piccolomini wrote: ‘The imagination is subservient in the wise man, in whom it serves under the direction of right reason, but it rules and leads in animals and madmen’ (*In tres libros Aristotelis De anima lucidissima expositio*, f. 151v). See also 1b above. Robert Burton offers examples of melancholic imagination which is not controlled by reason (i).

3 The Power of the Imagination

a. Four emotions follow the fantasy: desire, pleasure, fear and pain. All these, when they are most intense, immediately affect their own body, and sometimes even another’s ... How noxiously does the desire to inflict harm by assiduous staring

fascinate boys and others who are easily influenced. How manifestly does the greediness of a pregnant woman bear upon the delicate foetus with the imprint of what she is thinking ... It is said that beasts existed among the western Ethiopians called catoblepas which would take people's life solely with their eyes, as basilisks do near Cyrene. So great is the power in the vapors of their eyes. Why should your body be less affected by the soul of another than by the body of another? Why not more affected, since the soul is more powerful and does not need a mean through which to act? We read that some men among the Illyrians and the Triballi used to do the same thing. When they were angry, if they fastened their eyes on a man for a long time, they would put him to death. They had twin pupils in each eye. Certain women in Scythia did the same. Such is the power of the imagination, especially when the vapors of the eyes are affected by the emotions of the soul. For this magnificent attention of the fantasy augments its power no less than the ostrich's eye riveted on its egg. For when one emotion becomes kindled, another settles down. Therefore in the attention of the malefic fantasy, the natural affection that binds the soul to its body decreases for a while, so that released from its body to a greater degree, it starts to transform the new matter towards which it has just been drawn, as if to some new body of its own. (Marsilio Ficino, *Theologia platonica de immortalitate animorum* II.196; 234–235)

b. Avicenna believed that somebody's imagination can make a camel fall. Images of dogs will appear in the urine of a patient with rabies. The desire of a pregnant woman impresses the mark of the desired object on the foetus in the womb or causes any malformation or monstrosities. The intention of a witch to inflict damage makes a man powerless by the fascination of her gaze fixed upon him; similarly, the gaze of the toad and basilisk can kill. Plague and leprosy are transmitted by vapours exhaled, the latter being the product of a morbid imagination. What is harmful is not the vapour itself, but the action of the soul which the vapour conveys – since the soul is superior in 'power, strength, fervour and mobility' to any such material as vapour. Hence the philosophers enjoin us to avoid traffic with evil and unfortunate men whose souls, full of noxious rays, infest with dangerous contagion those whom they reach. (Agrippa of Nettesheim, *De occulta philosophia* I.65)

c. 'A strong imagination begets the event itself', say the schoolmen. I am one of those who are most sensible of the power of imagination: every one is jostled by it, but some are overthrown by it. It has a very piercing impression upon me; and I make it my business to avoid, wanting force to resist it. I could live by the sole help of healthful and jolly company: the very sight of another's pain materially pains me, and I often usurp the sensations of another person. A perpetual cough in another tickles my lungs and throat. I more unwillingly visit the sick in whom by love and duty I am interested, than those I care not for, to whom I look less. I take possession of the disease I am concerned at, and take it to myself. I do not wonder that fancy should give fevers and sometimes kill such as allow it too much scope, and are too willing to entertain it ...

Now all this may be attributed to the close affinity and relation betwixt the soul and the body intercommunicating their fortunes; but 'tis quite another thing when the imagination works not only upon one's own particular body, but upon that of

others also. And as an infected body communicates its malady to those that approach or live near it, as we see in the plague, the smallpox, and sore eyes, that run through whole families and cities –

When we look at people with sore eyes, our own eyes become sore. Many things are hurtful to our bodies by this sort of transition

– so the imagination, being vehemently agitated, darts out infection capable of offending the foreign object. The ancients had an opinion of certain women of Scythia, that being animated and enraged against anyone, they killed him only with their looks. Tortoises and ostriches hatch their eggs by only looking on them, which infer that their eyes have in them some ejaculative virtue. And the eyes of witches are said to be assailant and hurtful:

Some eye, I know not whose, is bewitching my tender lambs.

Magicians are no very good authority with me. But we experimentally see that women impart the marks of their fancy to the children they carry in the womb; witness her that was brought to bed of a Moor; and there was presented to Charles, the Emperor, and King of Bohemia, a girl from about Pisa, all over rough and covered with hair, whom her mother said to be so conceived by reason of a picture of St. John the Baptist that hung within the curtains of her bed. (Michel de Montaigne, *De la force de l'imagination* in his *Essais*, trans. Charles Cotton (1685), I.20)

Following Avicenna, Ficino explains how the malefic fantasy may cause bodily changes in its environment (a). In his commentary on Plotinus, Ficino maintained that there are two ways in which imagination could be conceived: either as the lowest degree of the superior soul; or as the highest degree of the inferior soul (Marsilio Ficino, *Opera* (Basel, 1576), vol. II, 1548–1549). In the notes to his translation of Priscian of Lydia, he also argued that imagination is the instrument by means of which rational concepts can be visualised, and that imagination has a protean character capable of transcending the senses (Marsilio Ficino, *Opera* (Basel, 1576), vol. II, 1825). For fantasy and imagination in Ficino, see Garin 1985; Tirinnanzi 2000; for Avicenna's influence on Ficino and other Renaissance authors, see Zambelli 1985; Hankins 2007. A popular list of the power of imagination is also offered by Agrippa of Nettesheim (b); Michel de Montaigne typically mixes personal observations and various popular beliefs (c). The theory of generation that credited the mother's imagination with the shape of her progeny, whether normal or monstrous, continued to be the object of heated debate until the beginning of the nineteenth century. See Huet 1993, Wilson 1993.

Chapter 10

Common Sense and Fantasy in the Seventeenth and Eighteenth Century

Tuomo Aho

The old theory of internal senses remained a subject of investigation in the scholastic philosophy of the sixteenth and seventeenth centuries. Similar ideas occurred in the works of non-scholastic philosophers as well, but usually not as one distinct subject (1). Of the former internal senses, *memory* was widely discussed. The *estimative sense* vanished except from strictly traditional scholastic philosophy. It had traditionally been closely associated with instinctual dispositions and with capacities of animals; the instincts were themselves often discussed in seventeenth-century arguments about the cognitive capacities of animals (2). The remaining internal senses, the *common sense* and the *imagination*, were dealt with by both scholastic and non-scholastic authors. As for the common sense, Descartes assumed in a traditional manner that it unifies various sensory images, but he sought a more naturalistic interpretation, omitting the traditional doctrine of transmission of species from the external senses, as many others did in the seventeenth century (3).

The term ‘common sense’ had also a less technical meaning, that is, a prudent and impartial view of matters, and this connotation began to displace the strict meaning of the *sensus communis* as a real inner *sense*. The non-sensory common sense, which had roots in the rhetoric tradition of prudence and community, could be understood as a faculty of understanding without proof and reasoning, like Montaigne’s *bon sens*. Vico alluded to the prudential common sense in his criticism of the use of the Cartesian rationalism in education. Some eighteenth-century authors, such as Buffier and Reid, referred to the common sense as the basis of non-sceptical acceptance of what should be obvious in particular representations. The term was occasionally explained with different connotations of ‘common’ as something naturally belonging to everybody: positively as prudential capacity, and negatively as minimal understanding (4).

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Opinions concerning the *imagination* began to undergo considerable change. The traditional views of the imagination and the role of phantasms were taught in seventeenth-century schools, but there were authors like Gassendi who regarded imagination in human beings and animals as sensitive reason which has acts closely analogous to those of the intellect. Hobbes also deemed the imagination as a central cognitive faculty, and he was interested in the connections between its various acts. Hobbes tried to explain the functions of imagination in accordance with his mechanistic physics, and Gassendi in light of his atomist theory. They assumed that the acts of the imagination are also associated with all conceptual thinking which uses universal terms. Descartes's view of imagination was narrower: in a basically traditional way, he supposed that imagination can only modify and combine the images given by the senses, without entering intellectual thought. He admitted that it could be an important aid for reasoning, but not necessary – and sometimes even harmful (5).

Hobbes distinguished between the phenomena of simple and compound imagination in a way that corresponds to the traditional distinction between real and fictional objects of imagination. Locke then referred to the same distinction in distinguishing between real and fantastical ideas, and he also dealt with non-existent objects and impossible objects. Similar issues were also discussed by Berkeley. A characteristic feature of the empiricist current was to think that imagination is a very general elementary type of dealing with any ideas, in other words, a basic type of thought. This attitude culminated in Hume's famous description that verges upon the view that all thoughts are imaginations if they are not particularly 'vivid' or 'strong'. So, the imagination operates with ideas which are produced by experience, but are less vivid. Yet Hume also noted that imagination can surpass the order and form of the original ideas (6).

A natural question arises about the 'creative imagination' (7). Classical doctrines had no clear place for it. Poetic and aesthetic criticism had noticed the capability of an artist to invent new items freely, but it is difficult to find any philosophical analyses of the issue. In the early eighteenth century, there were some attempts to discuss the imagination in artistic contexts which led towards a view on productive imagination.

1 Internal Senses

a. Even though the internal sense is one, and we called it fantasy in the broad sense of 'fantasy', in another way it is referred to by various terms according to its functions, such as the common sense, 'fantasy' in the special sense of the term, the estimative power, and memory. (Eustache de Saint-Paul, *Tertia pars summae philosophicae* 3.3.3)

b. All *Cogitations* which include *Consciousness*, are most especially two fold, *Actions* and *Passions*. All species of *Perceptions* or *Cognitions*, which are found in us, or which proceed from the power we have of perceiving or knowing, are called

Passions; and all such *Operations* are divided into four kinds, the first is *Intellect*, by which the *Mind* without the help of any *corporeal Species* perceives all manner of *Objects*, as well immaterial as material: The second is *Sense*, as well that which is external, as internal: The third is *Imagination*, containing under it common *Sense*; forasmuch as they are both actuated by the same *Organ*, and are employed about the same *Objects*: the fourth is *Memory* or *Reminiscence*, being that faculty by which we deprehend that we had formerly the same *Cognition*. Those *Cogitations* which are called *Actions*, are all our *Wills* ... to these are to be referred all our *Judgments*, *Inclinations*, *Appetites*, and all the *Motions* of our *Will* ... (Le Grand, *An Entire Body of Philosophy* III.1.17 (229))

c. Secondly, The other Fountain, from which Experience furnisheth the Understanding with *Ideas*, is the *Perception of the Operations of our own Minds* within us ... This Source of *Ideas*, every Man has wholly in himself: And though it be not *Sense*, as having nothing to do with external *Objects*; yet it is very like it, and might properly enough be call'd internal *Sense*. But as I call the other *Sensation*, so I call this *REFLECTION*, the *Ideas* it affords being such only, as the *Mind* gets by reflecting on its own *Operations* within it self. (Locke, *An Essay concerning Human Understanding* II.1.4)

Concerning the background of internal senses, see Park 1988. Eustache de Saint-Paul, in Descartes's opinion the best representative of scholastic philosophy (AT III, 232), expounds the traditional doctrine of the inner senses. He discusses their number and comes to the conclusion that their names refer to the various functions of one basic faculty (a). This view was also defended by Francisco Suárez (*Commentaria una cum quaestionibus in libros Aristotelis De anima* 8.1) and some medieval and Renaissance thinkers (pp. 136–137, 151 above). It is also found in Pierre Gassendi's *Physica* III.2.8 (402), where Gassendi interprets this faculty as the processing of images. A long section in Antoine Le Grand's Cartesian work *An Entire Body of Philosophy* consists of arguments for the view that animals have no consciousness, their behaviour being explained with the mechanical principles of machines. His summary of human cognitive faculties includes the traditional internal senses, except that of estimation, while the term 'internal sense' refers to perceptions of internal states (b). Locke also occasionally uses 'internal sense' in this way (c).

2 Instincts

a. We gave the example that a hen calls for her chickens in order to let them share in the grain she has found: she must have the intention to make them come, show them the food, and feed them, and they also must recognise the voice that summons them, comprehend what it signifies, and hope for the good that it announces. He [Chanet] merely replies that 'all this happens by instinct'. But that does not avoid

the difficulty. We should know whether all these actions take place consciously, for if that is the case, then it must also be admitted that there is reasoning, since this kind of progress from one conscious state to another cannot happen without discourse. And it does not matter if it happens by instinct: just as an instinctive fear is a real fear and of the same kind as other fears, so a reasoning that follows from instinct is a real reasoning and of the same nature as others. (Cureau de la Chambre, *Traité de la connoissance des animaux* IV.3.23)

b. But if it be required, how it comes to pass that so great a diversity of *actions* should be produc'd among *Beasts*? How each *Animal* should have its proper *Machination*, if they operate according to inbred *Impressions*, and are impelled as it were by a certain *weight*? I answer, that this happens from the various dispositions of the *Brain*, and the *Organ*, which according as it varies in *Animals* of a different *Species*, so it brings to pass, that an affection of the same *Object* is directed to different *Motions*: Forasmuch as nothing else can be understood by the name of *Natural Instinct*, than the *Local Motion* as of the whole, so of the minute parts indued with a certain *magnitude* and *Figure*, according to which *natural things* are distinguish'd, and obtain various denominations. Now those *motions* which follow *corporeal dispositions*, may be reduc'd to three Heads. The first is of those, by which *Animals*, through a certain inbred impulse, hate and decline those things which are hurtful and troublesome to them ... The second is of those by which *Beasts* apply themselves to the propagation of their Kind ... The Third is of those things by which *Brutes* provide for their own preservation ... (Le Grand, *An Entire Body of Philosophy* III.2.7 (251))

c. But though animals learn many parts of their knowledge from observation, there are also many parts of it, which they derive from the original hand of nature; which much exceed the share of capacity they possess on ordinary occasions; and in which they improve, little or nothing, by the longest practice and experience. These we denominate *instincts*, and are so apt to admire, as something very extraordinary, and inexplicable by all the disquisitions of human understanding. But our wonder will, perhaps, cease or diminish; when we consider, that the experimental reasoning itself, which we possess in common with beasts, and on which the whole conduct of life depends, is nothing but a species of instinct or mechanical power, that acts in us unknown to ourselves. (Hume, *An Enquiry concerning Human Understanding* 9 (81))

Instincts were central particularly in the domain of animal psychology. There were authors, like Michel de Montaigne, who saw close similarities between the mental capacities of human beings and animals (*Apologie de Raimond Sebond*). In criticising this opinion in his *De l'instinct et de la connoissance des animaux*, Pierre Chanet argued that the animal phenomena in question could be explained by instincts. Marin Cureau de la Chambre, one of the best known defenders of animal reason, objected that even instinctual reasoning is reasoning (**a**). The 'instincts' which were traditionally associated with the estimative power were here understood more extensively.

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The Cartesians who strongly denied all consciousness in animals could also use the notion of a natural instinct in referring to the mechanical principles which determine animal behaviour. Le Grand summarised the Cartesian mechanistic view of instincts **(b)**. His examples of instinctual behaviour were traditional: a sheep fleeing a wolf, ants, bees and birds as builders, spiders weaving webs, swallows tracing their way over vast distances, and so on.

Hume implied that both animal and human knowledge are largely results of the same instinctive and unaccountable cogitative power **(c)**. See also Leibniz, *Nouveaux essais* I.2, where Leibniz argues that both people and animals use instinctive cognitive principles: 'There are in us truths of instinct which are innate principles that we sense and approve, even when we have no proof of them – though we get one [proof] when we explain this instinct' (§ 4). For animal psychology, see Serjeantson 2001; Harrison 1998; Wild 2008.

3 Common Sense in Perception

a. It is certain, too, that the seat of the common sense must be very mobile in order to receive all the impressions which come from the senses; but it must be such that it can be moved by nothing but the spirits which transmit these impressions. Only the *conarium* [the pineal gland] is of this kind. (Descartes, Letter to Mersenne, 21 April 1641, AT III, 361–362)

b. My next observation is that the mind is not immediately affected by all parts of the body, but only by the brain, or perhaps even by just one small part of the brain, namely that part where the common sense is said to be. Every time this part is in the same state, it presents the same things to the mind. (Descartes, *Meditationes de prima philosophia* VI, AT VII, 86)

c. Some say the Senses receive the Species of things, and deliver them to the Common-sense; and the Common Sense delivers them over to the Fancy, and the Fancy to the Memory, and the Memory to the Judgement, like handing of things from one to another, with many words making nothing understood. (Hobbes, *Leviathan* I.2 (8))

Traditional authors assume common sense to have several perceptual functions of its own. 'Firstly, it perceives the sensibles of exterior senses simultaneously with them, for the external senses must compare the sensation by means of this sense ... Secondly, it belongs to this sense to perceive the differences of various proper sensibles ... Thirdly, it belongs to this sense to perceive the sensations of

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external senses' (Toletus, *Commentaria in Aristotelis De anima* III.2.5 (122ra)). Descartes, instead, concentrates on sensory physiology. His account of extrinsic senses requires there to be one central organ and capacity which serves as an endpoint for all sensory nerves, collecting the different impulses in a centre which is joined to the soul. The task of the pineal gland resembles that of the medieval common sense, but its functions are described in accordance with the mechanistic theory (**a**, **b**). '[The pineal gland is] the place where the seat of imagination and the common sense is located' (*Traité de l'homme*, AT XI, 176; cf. *ibid.* 202). See also *Meditationes*, AT VII, 32; *Discours de la methode*, AT VI, 55; Letter to Mersenne, 24 December 1640, AT III, 264–265; Cavaillé 1991, ch. 2.1.

The species theory of internal senses is criticised as empty speculation by Hobbes (**c**) and in the same spirit also by Malebranche: 'The most common opinion is that of the Peripatetics, who hold that external objects transmit species which resemble them and that these species are carried by the external senses to the common sense ... We shall not stay here to further investigate these charming things and the various ways different philosophers conceive of them ... Let us not stay longer to adduce all the reasons opposed to this opinion because that task would never end, and the least mental effort would yield an inexhaustible amount of them. Those reasons we have just given are sufficient, and even they were not necessary after what was said about this subject in the first book when the errors of the senses were explained' (*Recherche de la vérité* III.2.2 (418, 421)).

4 Common Sense in Understanding

a. Training in common sense ought to begin as early as possible in the education of adolescents, so that they will not break into odd and presumptuous behaviour when adulthood is reached. Indeed, just as knowledge originates in truth and error in falsity, so common sense arises from probability. Probability is between truth and falsity, as it were: almost always true, seldom false. (Vico, *De nostri temporis studiorum ratione* 3 (81))

b. By common sense I here mean the disposition which nature has put into all people, or obviously into the majority of them, for leading them, as soon as they have reached the age and the use of reason, to form a common and uniform judgement about the objects different from the inner sentiment of their own perception, a judgement which is not the consequence of any preceding principle. (Buffier, *Traité des premières vérités* I.5 (25))

c. Among us, this word ['common sense'] means nothing but good sense, simple reason, emerging reason, the first grasp of ordinary things, the state in between stupidity and ingenuity. 'This man has no common sense' is a bad insult. 'This man has the common

sense' is an insult, too: it means that while he is not actually stupid, he lacks what is called ingenuity ... It is sometimes said: 'Common sense is rare'; what does this phrase mean? That in many people the progress of the beginning reason is prevented by some prejudices; that a man who judges very soundly in one matter is gravely in error in another. (Voltaire, *Dictionnaire philosophique*, see 'Sens commun')

In his *The Method of the Study of Our Times*, Giambattista Vico defended the idea of a faculty of reasoning from probability and called it the common sense (a). This use had a background in the Roman and rhetorical tradition of prudence and communality. The value of common sense was an element of Vico's criticism of the use of the Cartesian rationalistic conception of science in education (Schaeffer 1990). Another influential approach to the common sense, which was also separate from psychology of perception, was Claude Buffier's definition of common sense as the faculty of forming immediate judgements about particular things (b). Buffier's *Primary Truths* was translated into English in 1780 in order to show that Thomas Reid and his followers grounded their anti-sceptical philosophy on a defence of 'the principles of common sense' plagiarised from Buffier; see *First truths and the origin of our opinions, explained: with an enquiry into the sentiments of modern philosophers, relative to our primary ideas of things: translated from the French of Pere Buffier: to which is prefixed a detection of the plagiarism, concealment, and ingratitude of the doctors Reid, Beattie, and Oswald* (London 1780), xii–xiii and Marcil-Lacoste 1982. Cf. Reid, *Essays on the Intellectual Powers of Man* VI.2, where he announces that common sense belongs to the natural constitution of human understanding. This was essential in the programme of the Scottish school of so-called common sense philosophy.

Gradually, the connection to psychological activity vanished completely, and the common sense became simply a good human feature, as in Voltaire (c) and in eighteenth-century English vocabulary; see Körver 1967. In one use, it referred especially to moral propriety: 'In the main, it is best to stick to common sense, and go no further. Men's first thoughts, in this matter, are generally better than their second; their natural notions better than those refined by study, or consultation with casuists. According to common speech, as well as common sense, Honesty is the best policy: but, according to refined sense, the only well-advised persons, as to this world, are errant knaves; and they alone are thought to serve themselves, who serve their passions' (Shaftesbury, *Sensus Communis: an Essay on the Freedom of Wit and Humour* IV.1). See also Thomas Paine's famous pamphlet *Common Sense*: 'In the following pages I offer nothing more than simple facts, plain arguments, and common sense; and have no other preliminaries to settle with the reader, than that he will divest himself of prejudice and prepossession, and suffer his reason and his feelings to determine for themselves' (81). See Kleger 1990.

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It may be added that Descartes also referred to the common natural light of reason (*lumen naturale*) which can disclose various necessary truths and even metaphysical principles (*Meditationes*, AT VII, 241). ‘All these conclusions have been stated and worked out without the help of logic and without any rule or pattern of argumentation, only by the light of reason and good sense, which is less liable to go wrong when it acts on its own than when it anxiously endeavours to follow a thousand different rules, which human ingenuity and indolence have invented and which serve more to corrupt it than to render it more perfect’ (Descartes, *La recherche de la vérité par la lumière naturelle*, AT X, 521). See also Jacquette 1996.

5 Acts of Imagination

a. Since the common function of fantasy, which is called imagination or the act of imaging, is not one but multiple, the division in three which concerns the acts of the intellect can also be applied to the acts of fantasy. The first and primary of these, or the one to which the term ‘imagination’ especially and properly applies, is simple apprehension: that is, the naked imagination of things without affirmation or negation ... The second operation of fantasy is composition and division, or assent or dissent, which are also called affirmation or negation or proposition, enunciation, or judgement ... the third operation is ratiocination, which is also called argumentation, discourse, or the judgement on consequence. (Gassendi, *Physica* III.2.8.4 (409–411))

b. But as wee have no Imagination, whereof we have not formerly had Sense, in whole, or in parts; so we have no Transition from one Imagination to another, whereof we never had the like before in our Senses. The reason whereof is this. All Fancies are Motions within us, reliques of those made in the Sense: And those motions that immediately succeeded one another in the sense, continue also together after Sense: In so much as the former coming again to take place, and be predominant, the later followeth, by coherence of the matter moved ... This Trayne of Thoughts, or Mentall Discourse, is of two sorts. The first is *Unguided, without Designe*, and inconstant ... The second is more constant; as being *regulated* by some desire, and designe ... The Trayn of regulated Thoughts is of two kinds; One, when of an effect imagined, wee seek the causes, or means that produce it: and this is common to Man and Beast. The other is, when imagining any thing whatsoever, wee seek all the possible effects, that can by it be produced; that is to say, we imagine what we can do with it, when wee have it. Of which I have not at any time seen any signe, but in man onely. (Hobbes, *Leviathan* I.3 (8–9))

c. Henceforth we are to undertake nothing without the aid of imagination ... We should carefully note that in all other propositions, in which these [mathematical]

words are employed as preserving the same signification, being similarly abstracted from their subjects, and not excluding or denying anything from which they are not really distinct, we can and ought to use the imagination as an aid. For even though the intellect attends precisely to what is designated by the word, the imagination nevertheless should fashion a true idea of the thing, in order that the same intellect, when required, may be able to turn toward the other features of the object which are not expressed by the word. (Descartes, *Regulae ad directionem ingenii* XIV, AT X, 443, 445)

d. I also showed clearly on many occasions that the mind can work independently of the brain, for the brain can in no way be employed in pure understanding, but only in imagining or perceiving by senses. Admittedly, when imagination or sensation is very lively, as occurs when the brain is disturbed, the mind is not easily free to understand other things. But when the imagination is less intense, we often have the experience that we understand something quite different from it. (Descartes, *Meditationes de prima philosophia*, AT VII, 358)

e. It must be noted that the fibres of the brain are much more agitated by the impression of objects than by the course of spirits, and this is why the soul is much more affected by external objects which it judges as present and as capable of making it feel pleasure and pain, than it is by the course of animal spirits ... With regard to what happens in the body, the senses and the imagination differ only in degree. (Malebranche, *De la recherche de la vérité* II.1.1.1(192))

Gassendi argues for one internal sense which he calls fantasy or imagination. His notion of the functions of this faculty is so broad that it contains close analogues to all the acts of the intellect which are carried out in terms of apprehended sensory images. Distinguishing between sensitive and intellectual reason, Gassendi holds that the faculty of fantasy in human beings and animals is a 'sensory reason' and that its operations could be explained by means of his atomist psychological theory (**a**). Hobbes is interested in different associations between acts of imagination, whether unguided wandering thoughts or those regulated by desire; like Gassendi, he also sees the basis of thinking in the activity of imagination, but, unlike Gassendi, he regards the use of language and reasoning with the help of language as restricted to humans (**b**). While Hobbes denies the immaterial mind, which is the seat of the highest cognitive functions for Gassendi, they both assume that even conceptual thinking must involve some acts of imagination. (See Leijenhorst 2002; LoLordo 2007)

According to Descartes, the imagination is a capacity for mental representation which is not found in animals. His view of imagination is somewhat inconclusive. In his early work *Regulae*, he states that, because of the present weakness of our intellect, the imagination is often an irreplaceable device for proper reasoning that concerns purely intellectual matters, such as mathematics

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(c). Later he is anxious to argue that the imagination, like the external senses, is essentially dependent on bodily processes and that the immaterial intellect can act without the imagination (d); see also *Meditationes*, 441, and *Discours de la methode*, AT VI, 55, about how imagination influences animal spirits. ‘Thus I realise that none of the things which I can grasp by means of the imagination pertains to my knowledge of myself, and that the mind must therefore be carefully withdrawn from such things if it is to perceive its nature in a most distinct way’ (*Meditationes* II, AT VII, 28). So imagining is completely foreign to the intellect. Arnauld, Gassendi and Hobbes criticise this argument in three different ways in their objections to *Meditationes* (AT VII, 178, 205, 266–267 and 329–332). Cf. also *La recherche de la vérité*, AT X, 507. The imagination differs from sensation in that it can be will-dependent and active (*Les passions de l’âme* 20, AT XI, 344). Descartes’s interest in the role of imagination in mathematics may be reflected in his establishment of the term ‘imaginary number’ (*Géométrie*, AT VI, 473). The issue is connected to the wider discussion about the necessity of constructive methods in mathematics. For the development of Descartes’s opinions, see Sepper 1996; Pätzold 2004; about mathematical construction, see Mancosu 1996, ch. 2 and 3.

In his *Ethica* (Part II prop. 16, 17, 35), Spinoza makes some observations about the physical causes of imagination (Verbeek 2008). Malebranche pursues the physical analysis, explaining that imagination and sensation act in the same way, but they differ because the effects from external objects are stronger than those of mere inner animal spirits (e). In fact, Malebranche doubts whether or not the so-called imagination can be regarded as one well-defined function at all. ‘The term “imagination” is much in use, but I find it hard to believe that all those who utter it attach any clear-cut meaning to it ... “Imagination” is one of those terms which the usage favours but does not make clear’ (*Traité de morale* 12 (206–207)).

6 Images and Ideas

a. By the word ‘idea’ I understand that form of any thought the immediate perception of which makes me conscious of the thought itself. Hence, if I can express something with words and understand what I say, then just because of this it is certain that there is in me an idea of what is signified by those words. And so I do not call ideas only the images that are depicted in fantasy. In fact, I do not call these images ideas at all, in so far as they are in the corporeal fantasy, that is, as depicted in some part of the brain, but only in so far as they inform the mind itself, when it turns to that part of the brain. (Descartes, *Meditationes de prima philosophia*, AT VII, 160–161)

b. You who want that the substance should be perceived only by the intellect and not also by the imagination, tell me how that is possible? What else is intellection except perception of an idea? What else is imagination except perception of an image? And when an idea is an image, what else is intellection but imagination? Whether the idea of a substance is genuine, clear and distinct is another question. (Gassendi, *Disquisitio metaphysica* (325))

c. Again, Imagination being only of those things which have been formerly perceived by Sense, either all at once, or by parts at severall times; The former, (which is the imagining the whole object, as it was presented to the sense) is *simple Imagination*; as when one imagineth a man, or horse, which he hath seen before. The other is *Compounded*; as when from the sight of a man at one time, and of a horse at another, we conceive in our mind a Centaure. (Hobbes, *Leviathan* I.2 (5))

d. By *real Ideas*, I mean such as have a Foundation in Nature; such as have a Conformity with the real Being, and Existence of Things, or with their Archetypes. *Fantastical or Chimerical*, I call such as have no Foundation in Nature, nor have any Conformity with that reality of Being, to which they are tacitly refer'd, as to their Archetypes ... Those [ideas] are *fantastical*, which are made up of such Collections of simple *Ideas*, as were really never united, never were found together in any Substance; v.g. a rational Creature, consisting of a Horse's Head, joined to a body of humane shape, or such as the *Centaurs* are described: Or, a Body, yellow, very malleable, fusible, and fixed; but lighter than common Water ... (Locke, *An Essay concerning Human Understanding* II.30.1; 5)

e. We find by experience, that when any impression has been present with the mind, it again makes its appearance there as an idea; and this it may do after two different ways: either when in its new appearance it retains a considerable degree of its first vivacity, and is somewhat intermediate betwixt an impression and an idea; or when it intirely loses that vivacity, and is a perfect idea. The faculty, by which we repeat our impressions in the first manner, is called the MEMORY, and the other the IMAGINATION ... In the imagination the perception is faint and languid, and cannot without difficulty be preserv'd by the mind steady and uniform for any considerable time. (Hume, *A Treatise of Human Nature* I, I.3 (8–9))

f. A miser receives delight from his money; that is, from the *power* it affords him of procuring all the pleasures and conveniences of life, tho' he knows he has enjoy'd his riches for forty years without ever employing them; and consequently cannot conclude by any species of reasoning, that the real existence of these pleasures is nearer, than if he were entirely depriv'd of all his possessions. But tho' he cannot form any such conclusion in a way of reasoning concerning the nearer approach of the pleasure, 'tis certain he *imagines* it to approach nearer, whenever all external obstacles are remov'd ... Whenever any other person is under no strong obligations of interest to forbear any pleasure, we judge from *experience*, that the pleasure will exist, and that he will probably obtain it. But when ourselves are in that situation, we judge from an *illusion of the fancy*, that the pleasure is still closer and more immediate. (Hume, *A Treatise of Human Nature* II, I.10 (314))

Descartes has a narrow notion of an image: according to him, images are in ‘corporeal fantasy’ as purely sensory phenomena, whereas ideas are completely different things in the mind itself **(a)**. On the other hand, Gassendi propounds a wide notion of an image, claiming that all ideas of thought must contain ideas that are sensory images **(b)**. Gassendi thinks that the traces and motions in the brain are proximate causes of the acts of imagination, the contents of which are properly the images of the original causes, whereas Hobbes straightforwardly identifies the acts of perception and imagination with inner motions (*Leviathan* I.2 (5); IV.46 (372)).

Hobbes distinguishes between the simple and the compound imagination in a way that corresponds to the traditional distinction between real and fictional objects of the imagination **(c)**. Locke applies the same difference in his definition of real and fantastical ideas **(d)**, and he also distinguishes between ideas about non-existent objects and impossible objects, even allowing the imagination of some contradictory things: ‘Whether such Substances, as these, can possibly exist, or no, ’tis probable we do not know: But be that as it will, these *Ideas* of Substances, being made conformable to no Pattern existing, that we know, and consisting of such Collections of *Ideas*, as no Substance ever shewed us united together, they ought to pass with us for barely imaginary: But much more are those complex *Ideas* so, which contain in them any Inconsistency or Contradiction of their Parts’ (II.30.5). Similar remarks were put forward by some late medieval authors, see p. 140 above. On ‘compounding and dividing’ in imagination, see also Berkeley, *The Principles of Human Knowledge*, Introduction 10. See Zeuch 2002; Ayers 1991, ch. 1; Tomida 2001; Bolton 2004; Owen 1999, ch. 4. About the physiology of imagination, see Rousseau 1969.

Hume’s general definition of the imagination seems to imply that all thought that is not especially vivid must be some kind of imagination **(e)**. However, he also characterises the imagination slightly more definitely, saying that ‘the imagination is not restrain’d to the same order and form with the original impressions’; it has ‘the liberty to transpose and change its ideas’. Moreover, Hume points out that there also exists a special function of conscious imaginative ability **(f)**. He calls this function Fancy, but explains it only very briefly.

7 Creative Imagination

a. It is this Talent of affecting the Imagination, that gives an Embellishment to good Sense, and makes one Man’s Compositions more agreeable than another’s. It setts off all Writings in general, but is the very Life and highest Perfection of Poetry.

Where it shines in an Eminent Degree, it has preserved several Poems for many Ages, that have nothing else to recommend them; and where all the other Beauties are present, the Work appears dry and insipid, if this single one be wanting. It has something in it like Creation; It bestows a kind of Existence, and draws up to the Reader's View several Objects which are not to be found in Being. It makes Additions to Nature, and gives a greater Variety to God's Works. (Addison, 'The Pleasures of the Imagination' XI, *The Spectator* 421)

b. All these notions and perceptions which we receive through the supply of the senses from present things move our mind strongly and intensely, but no longer than the object is present and given. As soon as it is taken away and replaced by another object, the notion of it also disappears in us ... The Father of mankind has provided them with a higher purpose and finer fate than that their knowledge would be so interrupted and variable and their notions and perceptions confined within such narrow boundaries. Therefore he has given the soul such a special force that it may by choice call forth again and awaken the notions and perceptions which it once received from the senses, if the objects are absent and far away. This force of the soul we call the imagination ... For a writer, the whole nature stands open for the use of his imagination: he is not working merely through one or two senses but keeps them busy one after the other. He gives to human beings the perfect form with all features of body and also speech. Animals get from him the various tones of their voices, and he gives to birds the sweet melody of song. Everything is full of life and true movement in his paintings ... (Bodmer, *Von dem Einfluss und Gebrauche der Einbildungs-Krafft* (3–5, 12))

c. The mind of man possesses a sort of creative power of its own: either in representing at pleasure the images of things in the order and manner in which they were received by the senses, or in combining those images in a new manner, and according to a different order. This power is called Imagination; and to this belongs whatever is called wit, fancy, invention, and the like. But it must be observed, that this power of the imagination is incapable of producing anything absolutely new; it can only vary the disposition of those ideas which it has received from the senses. Now the imagination is the most extensive province of pleasure and pain, as it is the region of our fears and our hopes, and of all our passions that are connected with them. (Burke, *On Taste* (15–16))

d. We are inclined to assume this limitation even before it is confirmed by examples if we simply consider the wide sphere of poetry, the infinite field of our imagination, the spirituality of its pictures which can coexist in great number and diversity, without covering or disturbing each other, as is the case with the things themselves or their natural signs in the narrow limits of space and time ... What we find beautiful in a work of art is not found beautiful by the eye but by our imagination through the eye. As the same picture can be called up again in our imagination by arbitrary or natural signs, so the pleasure must also be revived every time, though not to the same extent. (Lessing, *Laokoon*, ch. 6)

The creative imagination did not figure in the works of the major philosophers of the early modern period, but it was discussed in connection with aesthetic questions. Renaissance authors often emphasised and even praised the illuminating power of imagination (see pp. 152–153). However, by that they often meant, in the first place, an artist's gift, the ability to produce appropriate works of art. In the seventeenth century, classicist literary theory had no place for the imagination, which was understood as a random stream of associations: lively imagination was typical of the immature mind. Later, some authors recognised the creative aspect in imagination, though even they agreed that it is based on previous perceptions (**a**). The creative imagination came to the fore with the birth of the science of aesthetics. The aestheticians of the early eighteenth century, such as J.J. Bodmer and A.G. Baumgarten, praised the imagination, but they were mainly impressed by its power and voluntariness; its close connection to perception was not questioned (**b**). Some authors pointed out that imagination could be an independent source of pleasure and pain (**c**). Gradually, a new understanding of imagination developed, emphasising its independent resources and versatility (**d**). The so-called 'romantic imagination' with its contrast between fancy and imagination and with the ideal of a creative genius appeared at the very end of the century. See Nelson 2010; Guyer 2004; Campe 2006; Costazza 1992.

Part IV
Sleep and Dreams

Chapter 11

Ancient Theories

Mika Perälä

Sleep and dreams played an important role in ancient popular morality. It was commonly held that in sleep people experience dreams, visions and apparitions which can be seen as signs or indications of a variety of things. If carefully interpreted, they can reveal to us not only the psychophysical condition of the dreamer, his or her humoral balance or imbalance, and moral character, but also divine intentions and future events which are otherwise hidden to human understanding. The interpretation of dreams was an integral part of some established institutions, most notably healing, incubation, that is, ritual sleep in a sanctuary, and divination.

Ancient philosophers and medical writers gave various explanations of sleep and dreams. Sleep was accounted for in terms of internal factors, such as breaking of the visual stream, the vapours released from digestion, slackening of the tension in the *pneuma*, or a disorder of the spirit (1). Dreams were considered to reflect our wakeful experiences and internal conditions, and to have diagnostic and prognostic use (2). Some philosophers, such as Plato and the Stoics, presented theories compatible with the popular view that some dreams are divine in origin. Others, including Democritus, Aristotle and Lucretius, abandoned this view in an attempt to give a naturalistic explanation of dreams (3).

Plato's suggestion that dreaming cannot be discerned from waking was discussed in various ways not only by Aristotle and some of his commentators, but also by the Sceptics (4). Another widely discussed topic was the morality of dreams. Authors seem to have agreed that moral character had an effect on the content of dreams (5).

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1 Sleep

a. When the cognate fire is gone at nightfall, the visual stream is cut off. For when it encounters something different from itself, it is changed and quenched, as it is no longer of the same nature as the adjoining air inasmuch as the air lacks fire. Therefore it stops seeing and gives rise to sleep. (Plato, *Timaeus* 45d3–7)

b. ... waking and sleep belong to the same part of a living being, for they are opposites, and sleep appears to be a kind of privation of waking. (Aristotle, *De somno* I, 453b25–27)

c. ... there is no animal which is always awake or always asleep, but both these affections belong to the same animals. For if there is an animal which is capable of perception, it is not possible that it neither sleeps nor is awake, because both these are affections related to the perception of the primary perceptual capacity. On the other hand, it is not possible that either of these two affections should always belong to the same animal, for example, that some species of animal should be always asleep or always awake. For any organ with a natural function must become incapacitated when it exceeds the time it can work, for example, the eyes seeing, and must stop working, and so it is with the hand and anything else which has a function. (Aristotle, *De somno* I, 454a19–29)

d. Since it is impossible that a sleeping animal exercises, in the simple sense, any sense whatsoever, it is clear that the same affection must belong to every sense in the state referred to as sleep. For if it belonged to one sense, but not to another, a sleeping animal would perceive with the latter, but this is impossible. (Aristotle, *De somno* 2, 455a9–12)

e. ... sleep is not just any incapacity of the perceptual capacity, but this affection is one which originates from the evaporation related to nutrition. (Aristotle, *De somno* 3, 456b17–19)

f. Sleep arises from the slackening of the tension in the *pneuma*. (Diogenes Laertius, *Lives of Philosophers* VII.158)

g. In principle, sleep occurs when the power of the spirit is scattered around the body, and part has been expelled and gone away, and part is compressed and has retreated into the innermost. For only then the limbs loosen and relax. (Lucretius, *De rerum natura* IV.916–919)

h. ... when the brain itself wishes to have rest on account of excessive activity, it induces to the animal a natural sleep, and especially whenever the nutritive capacity is in a position to take advantage of abundant moisture in itself. (Galen, *De symptomatum causis*, Kühn 7, 143)

According to Plato, sleep arises because when the eyelids are closed, they prevent the internal fire from getting out and reaching external objects. As a result, the fire disperses and induces sleep (**a**). Sleep is followed by dreams if there are strong internal motions (see **2a**; for discussion, see Lorenz 2012, 245–246).

Aristotle maintained that sleep was a sort of privation of waking (**b**). Sleep is needed because no natural function can be always active (**c**). Sleep is thus required for the preservation of life, and this can be seen as the teleological cause of sleep (*De somno* 3, 458a31–32). In sleep, one cannot perceive anything in the simple sense of the word (**d**). This means that one cannot have proper perceptions, although the perceptual capacity need not be entirely inactive (see **2**). Aristotle stressed the evaporation of nutrition as a cause of sleep (**e**), but it is difficult to see why it should explain all cases of falling asleep, because one should be able to fall asleep even without having a meal for hours. According to Aristotle, ‘one awakes from sleep when digestion is completed’ (*De somno* 3, 458a10). On sleep as a potentiality, see Aristotle *Metaphysics* IX.6, 1048a37–b4; and as a state, see *Nicomachean Ethics* I.8, 1098b33–1099a2; X.6, 1176a33–35.

The Stoics explained sleep in terms of the slackening of the tension in the *pneuma* (**f**); see also Aëtius, *Placita* V.23.4. According to the Stoics, a certain kind of *pneuma*, the psychic one, is that which makes an animal capable of perception and movement (Galen (?), *Introductio seu medicus*, Kühn 14, 726). Lucretius refers in his explanation of sleep to the disorder and weakening of the spirit. This results in the relaxation of the limbs including eyelids, when animals and human beings fall asleep (**g**). On a more detailed explanation with reference to food as a further cause of sleep, see *De rerum natura* IV.932–961.

Galen benefited from Aristotle’s account of sleep, but he criticised some of Aristotle’s assumptions which were based on his cardiocentric psychological theory. According to Galen, one problem in Aristotle’s theory was to explain why the primary perceptual capacity (which was, in Aristotle’s view, located in the heart) should be incapacitated when the head is filled with moisture after meal. Backed up by the findings by the Alexandrian physicians Herophilus and Erasistratus, Galen himself attributed the perceptual and intellectual capacities to the brain. His view also differed from Aristotle’s in that he explained sleep in terms of the brain’s need for rest: in Galen’s view, the moisture related to nutrition typically co-occurs with sleep, but is not the (primary) cause of sleep (**h**); for discussion, see van der Eijk and Hulskamp 2010, 66–74. For an overview of sleep in ancient sources, see Kroker 2007, chapter 1.

2 Dreams

a. Anyone who correctly understands the signs which occur in sleep will discover that they have great significance for everything. For when the body is awake, the soul attends to it. It is divided into many parts and is not engaged on its own, but assigns a part of itself to each part of the body: to hearing, sight, touch, walking, and to actions of the whole body. Yet the mind is not engaged on its own. However, when the body is at rest, the soul, moving and creeping out into the parts of the body, administers its own house and accomplishes all actions of the body. For the body does not sense in sleep, whereas the soul is awake and cognisant: it sees what is visible, hears what is audible, walks, touches, feels pain, ponders, though finding itself in a very little room. All kinds of service of the body or of the soul are done by the soul in a dream. Thus, whoever knows how to interpret these acts correctly, knows a great deal of wisdom. (Pseudo-Hippocrates, *On Regimen* IV.86)

b. Images pass through the pores into the bodies and, when being carried upward, induce dreams. They haunt one, arising from all kinds of things: vessels, clothes and plants, and especially from animals because of their great restlessness and heat. And these images not only bear formal likeness to a corporeal object (as Epicurus thinks, following Democritus thus far, but then abandoning his account), but they also receive each person's motions and resolutions pertaining to the soul and reflections of characters and passions and draw them along with themselves. And when they enter with these attributes into the bodies, they talk, as if they were living beings, and inform those who receive them on the beliefs, discussions and pursuits of those who emit them. (Plutarch, *Moralia* VIII.10.2 (*Quaestiones convivales*))

c. When the eyelids, which are constructed by the gods to protect the sight, are closed, they confine the power of the internal fire, and this disperses and smoothes the internal motions. And when they have been smoothed, a calm arises. When this calm gets deep, a sleep with a few dreams occurs. However, if there remain some stronger motions, they present internal images, resembling in kind and number the quality and places of the remaining motions, and these images are remembered when we are awoken from sleep. (Plato, *Timaeus* 45d7–46a2)

d. ... in sleep one neither sees, nor hears, nor, generally, perceives. Thus, while it is true that the one who dreams sees nothing, it is not true that one's sense undergoes nothing: it is possible that the sense of sight and the other senses undergo something when each of their objects, as when one is awake, strikes against the sense in a way, although not in the same way as when one is awake. (Aristotle, *De insomniis* 1, 458b33–459a5)

e. It is clear that dreaming belongs to the perceptual capacity *qua* the capacity for *phantasmata*. (Aristotle, *De insomniis* 1, 459a21–22)

f. Dream is a *phantasma*, which arises from the change deriving from that which is perceived, when it occurs during sleep, insofar as one is asleep. (Aristotle, *De insomniis* 3, 462a29–31)

g. When we are supposed to act, or are engaged in action, or have performed an action, we are often concerned with these actions, or performing them, in a vivid dream. This is because there is a change, arising from the original changes in the daytime, which has paved the way for a dream. Likewise, but conversely, it is necessary that the changes occurring in sleep are often starting-points of daytime actions, because, in turn, the way has been paved for the thought of these actions in one's nocturnal *phantasmata*. (Aristotle, *De divinatione per somnum* 1, 463a23–30)

h. The changes which arise in the daytime, unless they are very great and strong, pass unnoticed beside more considerable waking changes. However, the opposite takes place when one is asleep, for then even tiny changes seem to be considerable. This is clear from what often happens in sleep. For example, one thinks that one is struck by thunder and lightning although there is only feeble ringing in one's ears, or that one is enjoying honey or any other sweet flavour when a small drop of phlegm is flowing down, or that one is walking through fire and feeling very hot when some parts of the body are only slightly warmed up. However, when one is awakened, these things appear as they are. As a result, since all things have a small beginning, it is clear that this is also the case with diseases and other affections which are arising in the body. It is obvious, then, that these must be more manifest in sleep than in waking. (Aristotle, *De divinatione per somnum* 1, 463a7–21)

i. For we do not only say that the object approaching is a man or a horse, but also that it is white or handsome. Of these points opinion, whether it is true or false, could not state anything without perception. However, the soul happens to do this in sleep, for we think we see that the approaching object is a man no less than that it is handsome. Furthermore, in addition to the dream, we think of something else just as we do when we perceive something while awake. For often we also think something of what we perceive. So it also is in sleep, as we sometimes think of something else than the *phantasmata*. (Aristotle, *De insomniis* 1, 458b10–18)

j. When sleep has relaxed the limbs, there is no other reason why the intellect of the mind is awake except that our mind is struck by the same images as when we are awake, and to the extent that we certainly seem to discern the one who has departed from life, and over whom death and dust reign. The nature compels this to happen, because all our senses are blocked and at rest throughout the body, and they cannot turn down the false by the truth. Furthermore, memory is inactive and rests in sleep, and it does not contradict that the person whom the mind takes itself to be seeing alive has long since been under the power of death and ruin. (Lucretius, *De rerum natura* IV.757–767)

k. Then what wonder is it, if the mind misses everything except what it attends to? Furthermore, we make great judgements from small signs, and ourselves lead ourselves astray. (Lucretius, *De rerum natura* IV.814–817)

l. Dreams indicate for us the condition of the body. If someone sees a conflagration in sleep, he is troubled by yellow bile. If he sees smoke or mist or deep darkness, he is troubled by black bile. And a storm of rain indicates an excess of cold moisture, while snow, ice and hail indicate cold phlegm. (Galen (?), *De dignotione ex insomniis*, Kühn 6, 832)

Dreams were seen to be signs of our internal conditions in the Hippocratic tradition as shown by the manual known as *On Regimen*, Book IV (a). It was customary that a skilful physician interpreted dreams as part of his diagnostic and prognostic practice (for more on this, see I with the comments below). The idea that the soul is set free from the body in sleep was a common opinion in antiquity, but it was discussed in more sophisticated terms by many philosophers.

According to Democritus, the universe consists of an infinite number of tiny atoms, which interact and gather to constitute visible, ordinary objects. These objects emit a continuous stream of images, or films, or effluences. Perception arises from the impact of these images on the sensory organs, whereas thought occurs when images penetrate the pores of the body, bypassing the senses, and directly act on the soul. Now Democritus' argument, as reported by Plutarch, is that the direct impact of images on the soul is also the explanation of dreams (b). He states that images can display all sorts of attributes of the objects which emit them. This is why we can have dreams, for example, of other people thinking, feeling and acting. For Democritus' view, see also Aristotle, *De Divinatione per somnum* 2, 464a6–19. For the pores, see also Lucretius, *De rerum natura* IV.975–977.

Plato explained the occurrence of dreams in terms of internal fire and internal motions (c). When the visual stream that consists of internal fire collides with the eyelids, it diffuses within the body and, as a result, smoothes internal motions and induces sleep with a few dreams. These dreams need to be sweet and calm to be contrasted with stronger motions, which presumably manifest themselves as more vigorous and restless dreams.

According to Aristotle, the perceptual capacity is not entirely inactive in sleep (d). Dreaming is something that is exercised by the perceptual capacity insofar as it is understood as a capacity for *phantasmata* (e). This explains why dreams can be seen in sleep, although one does not see, hear, smell, taste or touch anything in the proper sense of these words (d). *Phantasmata* derive from perceptions (f). Most scholars assume that by *phantasma* ('that which appears'), Aristotle refers to an appearance or a mental image (f and h); see e.g. Ross 1955, van der Eijk 1994, Gallop 1996.

Aristotle argues that dreams reflect one's wakeful activities, and that they can give rise to such activities (g); for the former point, see also Lucretius, *De rerum natura* IV.962–970; for discussion, Brown 1987, 171–173. Aristotle also argues that small changes become more manifest in sleep than in waking (h). This is because when we are awake, small changes pass unnoticed because they are overshadowed or entirely overridden by greater changes, while in sleep, they find their way to the 'principle of perception' (*De insomniis* 3, 461a6–7) and present themselves in the absence of greater changes. Some of these minor

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changes reflect our bodily conditions, including affections and diseases. Aristotle refers to this kind of dreams as ‘signs’ (*De divinatione per somnum* 463b31–32). If they are correctly interpreted, they can inform us, for example, of an imminent disease. It is likely that Aristotle relies on Hippocratic tradition here. It is reasonable to suppose that these dreams need not derive from sense perception (cf. **e**). On Aristotle’s discussion of the relationship between dreams and bodily conditions, see also *De insomniis* 3, 460b28–461a25. In contrast with sleep (*De somno* 3, 458a31–32), Aristotle did not assign any teleological cause to dreams. For discussion, see van der Eijk 2005, chapter 6. Aristotle suggests that one may have thoughts while being asleep (**i**). However, this does not imply that one should understand anything in the proper sense of the word. On having, but not exercising, knowledge while being asleep, mad or drunk, see *Nicomachean Ethics* VII.3, 1147a10–b17. See also the probably post-Aristotelian *Problems* XXX.14, 956b38–957a35; for discussion, van der Eijk and Hulskamp 2010, 54–58.

In *Republic* IX, 571b–572a (**5a**), Plato assumes that the reasoning part of the soul may function even while dreaming. In the *Timaeus*, however, he argues that one cannot understand divinely inspired visions until one is awake (**3c**). On a similar view, see Augustine, *De Genesi ad litteram* XII.9.20. For discussion, see Sheppard 2003.

According to Lucretius, the mind entertains images in sleep, but our judgement is easily mistaken, because memory does not serve it (**j**). Dreaming is not just seeing a succession of images in sleep (**k**). Lucretius’ point about ‘making judgements’ (*adopinamur*) is that dreaming also involves non-perceptual activity, which explains why dreams are delusive. According to Lucretius, there are numerous images present to one’s mind at any given time, and the mind can only attend to a few of these. For discussion, see Holowchak 2004, 363–364. See also Lucretius’ discussion on how images in dreams arrive at the *animus* (IV.779–787 and 802–817), and how they move (4.788–801). For *phantasia* and intellect in dreaming, see also Synesius, *De insomniis* 7.2 and 19.3.

The author of the text (**l**) is uncertain, but the text is traditionally ascribed to Galen. According to the author, dreams can be explained in terms of humours, which are yellow and black bile, blood and phlegm. Some dreams are indicative of an imbalance of these humours. For example, a dream of conflagration is a symptom of an excess of yellow bile. This was a commonplace of Hippocratic doctrine. However, the author was cautious to warn his reader that not all dreams can be explained in this way. This is because some dreams derive from our wakeful affairs, while others may be due to the food which we have had before going to bed, or to the circumstances in which we are sleeping. For discussion of this text, see Oberhelman 1983. See also Oberhelman 1987, 1993 and Holowchak 2001.

3 Prophetic Dreams, Divination and Their Criticism

a. Socrates: Then I do not think it [i.e. the ship of Theseus] will arrive on the next day, but on the day after that. I judge this from a dream I had a little earlier during this night. You ran the risk of not waking me at the right time.

Crito: What was your dream?

Socrates: It seemed that a beautiful and comely woman dressed in white approached me. She called me, saying: ‘Socrates, you may arrive at fertile Phthia on the third day.’

Crito: What a strange dream, Socrates.

Socrates: But I think it was clear enough, Crito. (Plato, *Crito* 44a5–b5)

b. And again, whenever a gentle inspiration of thought should portray opposite apparitions, it would stay away from the bitterness by declining to move and to touch a nature opposite to its own. However, it would use the liver’s own natural sweetness for this purpose, making all of it straight, smooth and free, and rendering the part of the soul which is around the liver happy and well behaved. And it would conduct itself moderately at night, exercising divination by dreams, as it has no share in reason and understanding. (Plato, *Timaeus* 71c–d)

c. The claim that god presented silly people with divination has adequate evidence: for no one in his right mind engages in inspired and true divination. This happens only when one’s capacity for understanding is bound in sleep or by sickness, or when one is out of one’s wits because of some sort of possession. On the other hand, we must be in our right mind to understand and recall the enunciations which are due to the divination or possession in sleep or while awake. And we must, by means of reason, analyse all apparitions which are seen in order to determine how and for whom they signify some future, past or present good or evil. However, as long as we are mad and remain in this state, we are not in a position to judge our own visions and voices. (Plato, *Timaeus* 71e–72a)

d. Posidonius maintained that people dream under the influence of gods in three ways. First, the soul foresees by itself because it bears affinity to the gods. Secondly, the air is full of immortal souls in which what one might call distinctive marks of truth are visible. Thirdly, the gods themselves converse with people when they are asleep. (Cicero, *De divinatione* 1.64)

e. In general, since some of the other animals also dream, dreams could not be sent by a god, nor are they designed for this purpose [i.e. foreseeing the future]. However, they are mysterious, for nature is mysterious, though not divine. A sign of this is that rather inferior people are capable of foreseeing the future and of having vivid dreams, which implies that they are not sent by a god, the fact being that those who are chatty and melancholic by nature see all sorts of sights. For it is because of their undergoing numerous changes of all kinds that they just happen to entertain visions resembling what is truly seen, being lucky in these matters like the ones who

play at dice. There is also the dictum, 'If you make many throws you will make a different throw each time,' and this applies to their case. (Aristotle, *De divinatione per somnum* 1, 463b12–22)

In antiquity, there were various classifications of dreams which typically included god-sent or prophetic dreams; see e.g. Homer, *Odyssey* XIX.560–567; the Hippocratic work *On Regimen*, Book IV; Macrobius, *In somnium Scipionis* I.3; cf., however, Aristotle, *De divinatione per somnum* 1, 462b26–28. Plato attributes to Socrates a prophetic dream, which enables him to foretell the future (a). Plato elaborates on god-sent dreams from a physiological point of view in the *Timaeus*, suggesting that the apparitions in sleep are displayed by the liver which is particularly suitable to receiving such affections (b). He continues that people are capable of divination only when their understanding is out of order. This happens when one is asleep, or ill, or possessed and thus out of one's wits. However, a correct interpretation of dreams requires sound understanding (c). For other discussion by Plato, see *Phaedo* 60c–61c; *Republic* II, 382e–383a; *Republic* IX, 571a–572b; *Phaedrus* 244b–c; *Symposium* 203a; *Timaeus* 70e–72d.

According to Cicero, the Stoic Posidonius considered prophetic dreams to be possible (d). This was particularly stressed by the Neoplatonic philosopher Iamblichus; see *De mysteriis* III.2. For Christian views, see Tertullian, *De anima* 44–49; Origenes, *Contra Celsum* I.48; Athanasius, *Contra gentes* 31.38–45; Gregory of Nyssa, *De hominis opificio* 13; Augustine, *De Genesi ad litteram* XII; *Letters* 9 and 159; Nemesius of Emesa, *De natura hominis* 40.13–22; 68.4–5; Synesius, *De insomniis*. On dream interpretation, see *Oνειροκριτικά* by Artemidorus of Daldis. It is noteworthy that he did not pay attention to what is referred to as episodic dreams.

Aristotle remarks that dreams are experienced even by some animals other than human beings (e; see also *Historia animalium* IV.10, 536b25–537b11). This is one of his reasons that dreams cannot be sent by gods. He seems to assume that if dreams were divine in origin, they would be experienced by people who are most pleasant to gods, in other words, by people who excel in their moral and intellectual virtues. However, these people, according to Aristotle, do not have prophetic dreams, so there are no dreams sent by gods. Aristotle's reference to the mysterious nature (*physis daimonia*, 463b14) of dreams was given a physiological interpretation by the Peripatetic Strato of Lampsacus (fr. 130), who had in mind the chatty and melancholic people referred to a few lines later (463b18; see also *Eudemian Ethics* VII.14, 1248a39–40). For discussion, see van der Eijk 2005, 190–191; Repici 1988, 57–62; van der Eijk and Hulskamp 2010, 58–59. Lucretius also attributes dreams to some animals such as horses, dogs and birds; see *De rerum natura* IV.984–1010.

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In contrast to Aristotle, many of his successors in the Peripatetic School as well as his later commentators appreciated divination in sleep and associated it with rational thought. They maintained that in sleep, the soul is separated from the body, and is thus capable of acquiring knowledge independently of the senses. This line of argument can be observed in Dicaearchus (fourth century BCE), Clearchus (fourth or third century BCE) and Cratippus (first century BCE); see Cicero, *De divinatione* 1.70; 1.113; 2.100; Aëtius, *Placita* V.1.1–2.4. Much later this tendency can be attested in the Arabic versions of the *Parva naturalia* by Averroes; for discussion, see van der Eijk and Hulskamp 2010, 59–61.

4 Awareness of Being Asleep

a. Socrates: I guess you have often heard people ask what proof one could present if one were now asked in this way whether we are asleep at the moment and dreaming all that we are thinking of, or awake and talking to each other in a waking state.

Theaetetus: Yes, Socrates, it is indeed difficult to say by what proof that needs to be shown. These states follow closely one another in all respects like correlatives. There is nothing to prevent it from seeming in sleep that we are discussing the things which we have just discussed. And when, in sleep, we think we are telling dreams, there is an extraordinary likeness between those states. (Plato, *Theaetetus* 158b–c)

b. He says that such difficulties are similar to being puzzled about whether we are now asleep or awake. For, not even in this case, if one leaves aside that which is obvious and looks for some sort of argument, is it easy to get any piece of evidence by which this difference will be made. For all that we do while awake, we also do while having dreams; we even explain dreams while dreaming. (Alexander of Aphrodisias, *In Metaphysica* IV.6 (317.17–21))

c. Appearances arise from non-existing objects just as from existing ones. And the fact that they are found equally evident and striking is a sign of their indistinguishability, while the subsequent actions are linked with their being equally striking and evident. For just as a thirsty person, when he is awake, takes pleasure in having drink, and the one who flees from a beast or another frightening object shouts and cries, so also in dreams relief is experienced by those who are thirsty and think they are drinking from a fountain, and likewise fear is experienced by those who are frightened. (Sextus Empiricus, *Adversus mathematicos* VII.402–403)

d. Just as if the finger being pressed under the eye passes unnoticed to one, one object will not only appear to be two different objects, but will be believed to be two. While if it does not pass unnoticed, it will still appear to be two, but will not be believed to be two, and so it is with dreams. If one perceives that one is asleep, i.e. the drowsy experience in which perception occurs, it appears still, but something within one says that although Coriscus appears, he is not present; for often, when one is asleep, there is something in the soul which says that which appears is a dream. But if sleeping passes unnoticed to one, there is nothing which will contradict the appearing. (Aristotle, *De insomniis* 3, 461b30–462a8)

Plato gave in the *Theaetetus* several counterarguments to what is referred to as the Protagoras' Thesis ('Man is the measure of all things', 152a2–3, which is taken to imply another thesis, 'Things are for a subject just as they appear to him', 152a6–7) and the related Heraclitus' Flux Theory (152c–157c). An objection to the latter was that a flux theorist cannot reasonably distinguish between true appearances such as wakeful perceptions and false appearances such as dreams. However, Plato admits in this connection that it is difficult to show whether we are awake or dreaming (**a**). Aristotle's response was that things such as this need not be demonstrated by argument; see *Metaphysics* IV.5, 1010b8–11 and IV.6, 1011a6–7. Alexander of Aphrodisias comments on the latter passage (**b**); see also his *In Metaphysica* IV.6, 313.1–4. Other sources include Epictetus, *Discourses* I.5.5–6; Lucretius, *De rerum natura* IV.757–764; Diogenes of Oenoanda fr. 9. IV.7–VI.3.

Pyrrhonian sceptics such as Sextus Empiricus used the alleged indistinguishability between true and false appearances as criticism against the Stoic criterion of truth. The objection was that if there are cases in which we can discern no difference between cognitive appearances and non-cognitive appearances, cognitive appearances, unlike the Stoics claim, cannot be regarded as the criteria for truth. Sextus states here that an appearance that originates from an existent object can be indistinguishable from an appearance that concerns a non-existent object, for example, when one is asleep and dreaming (**c**). He argues in support that we feel about and act on an appearance in similar ways, whether the appearance is related to an existing or non-existing object.

Aristotle did not believe that true and false perceptions, or true and false appearances, could not be discerned in most cases: if we fail to discern the difference, this happens only under certain circumstances, for example, when a finger is pressed under one's eye unnoticed to one. Aristotle makes two points here (**d**). First, he draws a clear line between appearance and belief: what it

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is for an object to appear to be something is different from what it is for someone to believe that it is such (or that it is not such). Although appearance and belief are different, they can co-occur: for example, an object can look to be two objects, but we judge that they are not. Secondly, he argues by analogy that this distinction also applies to dreams. It follows that in Aristotle's view, we can sometimes be asleep and have dreams, but perceive that we are asleep, and realise that they are just dreams. In all probability, Aristotle discusses a phenomenon that is nowadays referred to as a lucid dream. He is very cautious regarding what accounts for perceiving that one is asleep: Is it a perceptual capacity or an intellectual one, or are they both involved? Aristotle's reference to 'something within one' (*De insomniis* 3, 462a4-5) is neutral with respect to these options. He occasionally uses perceptual terms in referring to intellectual activities; see, for example, practical reason, *phronēsis*, as a kind of perception, in *Nicomachean Ethics* VI.8, 1142a23-30.

5 Moral Aspects of Dreams

a. Consider, then, what I want to think about desires. It is this: I think some of the unnecessary pleasures and desires are violent. It is likely that they occur in everyone, but are checked by the laws and by the nobler desires with the help of reason. In some people, they have been removed entirely or only a few weak ones remain, while in others they are stronger and more numerous.

What desires are you talking about?

I mean those that are awakened in sleep, when the rest of the soul, that is, the rational, gentle and commanding part, is at rest. Then the brutal and fierce part, full of food and drink, is unruly and, having shaken off sleep, seeks to find a way to appease its own character. You know it dares to do anything in that state, being released and set free from all shame or reason. It does not hesitate to attempt to have intercourse with a mother, as it assumes, or with any other man, god, or beast. It will commit any murder, and it abstains from no food. In a word, it refrains from no act of folly or shamelessness.

This is definitely true.

On the other hand, I suppose that a person who is healthy and conducts himself reasonably goes to sleep only after having roused his rational part and entertained it with fine arguments and considerations, attaining to the state of contemplation. He neither starves his appetitive part nor gives it too much, so that it will be at rest and will not disturb his best part by enjoying pleasure or feeling pain, leaving the best part alone, pure and by itself, to examine and to aspire toward perceiving what it does not know, whether it is past, present, or future. And again, he

likewise soothes his spirited part and does not fall asleep if he has got angry with some people, and his spirit is still aroused. However, when he quietens these two parts and arouses the third, in which reasoning takes place, and thus takes his rest, you see that in this state he best grasps the truth, and that the visions that appear in his dreams are least violent. (Plato, *Republic* IX, 571b3–572b1)

b. Thus a question sometimes arises about the consent given by those who are asleep when they think they have sexual intercourse either contrary to their good resolutions or against what is lawful. This does not happen unless there is something that we also thought while awake, not by consenting to an opinion, but in a way in which we also speak of such things for some reason. They are recalled and expressed in dreams so that the flesh is naturally moved by them. And the flesh discharges through the genitals what it has naturally collected, a fact that I could not mention without also thinking of it.

Furthermore, if the images of the corporeal things that I necessarily thought of in order to say this appeared in sleep in the same manner as do corporeal objects to those who are awake, there would happen that which could not happen without sin while one is awake. For who could refrain from thinking about what he is speaking, at least when he is speaking of this and is saying by the necessity of the subject something about his own sexual intercourse? Again, when the appearance which arises in the thoughts of the speaker becomes so vivid in the vision of the sleeper that he does not distinguish between it and a real corporeal intercourse, the flesh is immediately moved, and what is usually the result of this motion follows. However, this happens without sin, just as the one who is awake speaks without sin of something which he doubtless thinks about in order to speak of it.

However, a good affection of the soul, which is purified by a better desire, eliminates many desires which are not related to the natural motion of the flesh. Chaste people who are awake curb and restrain this motion. However, in sleep they are unable to do so because they do not control the appearance of those corporeal images which cannot be discerned from bodies. Thus, owing to this good affection, the soul's merits are sometimes obvious even in sleep. Even in sleep, Solomon preferred wisdom to every other thing and, overlooking others, begged it of the Lord, and, as Scripture attests, this was pleasing to the Lord, and He did not hang back on rewarding this good desire. (Augustine, *De Genesi ad litteram* XII.15.31)

Plato divided in the *Republic* the soul into three different parts: the desiderative, the spirited, and the rational (**a**). According to him, a vicious person is unable to restrain his sensual desires in sleep because the rational part of his soul is at rest. However, these desires do not disturb a virtuous person in sleep, since he has prepared himself against them by arousing his rational part and by soothing the desiderative and spirited parts before falling asleep.

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Sigmund Freud (1956) referred to this passage as evidence for his distinction between manifest meaning and latent meaning. However, this distinction is unfamiliar to Plato. Cf. Aristotle, *Nicomachean Ethics* I.13, 1102b3–11; *Eudemian Ethics* II.1, 1219b16–25; on the Stoic Zeno, see Plutarch, *De Profectu in virtute* 12 (*Moralia* I).

Augustine's discussion of dreams can be understood in light of his conception of sin (**b**). According to Augustine, sin develops through three different stages: suggestion (*suggestio*), pleasure (*delectatio*) and consent (*consentio*). Augustine denies that we give our consent to dreams and, therefore, we cannot commit a sin in sleep. However, dreams reflect our wakeful thoughts and desires, and they can reveal our moral character. We need to fight against the occurrence of improper dreams by purifying our thoughts and desires while awake with the help of God. Some exceptionally chaste people such as Solomon are able to pray God even in sleep. See also *Confessions* X.30.41 and *De trinitate* XI.4.7. On discussion, O'Daly 1987, 114–120; Flanagan 2000.

Desert fathers and some other early Christian writers took the examination of one's own dreams as an integral part of the pursuit of self-perfection. For discussion, see Knuuttila 2006, chapter 2. On more general studies on dreams and their interpretation in antiquity, see Cox Miller 1994; Näf 2004.

Chapter 12

Medieval Theories

Pekka Kärkkäinen

Many medieval writers argued that sleep was caused by corporeal processes related to digestion. This theory was largely transmitted to the medieval West through the medical treatise *Pantegni* which considered the vapours of digestion rising to the brain as the cause of termination of the sensory operations in sleep. While this explanation was later supported by Aristotle's works, it was in most cases based on a brain-centered view of perception (1). Some medieval authors elaborated the ancient classifications of types and causes of dreams. An anonymous twelfth-century treatise *Liber de spiritu et anima* disseminated Macrobius' classification of dream-content into the following five categories: oracular saying, vision, dream, nightmare, and apparition. Other writers like Averroes provided psychological explanations based on standard notions of internal perceptive faculties (2). Among various kinds of dreams, the nature of prophetic dreams was discussed in particular. Thomas Aquinas thought that both God and natural agents, such as separate substances, cause prophetic dreams (3). The similarities and dissimilarities between cognition in dreaming and in external perception were also discussed by many authors (4).

1 Sleep

a. This fine and sweet fume ascends from digestion and gently touches the brain and fulfils its small cavities so that all its activities are tempered down. This is sleep. In this state all powers of the soul cease to act and only the natural power is active; it acts more intensively when it is not prevented by nature. The inner soul which has excluded all functions of the senses presents to itself past, present and future things. These are dreams. (William of Saint-Thierry, *De natura corporis et animae* I.11–12 (83))

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b. With sleep it is not clear what the first subject of this passion is. It is clear that an animal is the subject of sleep, but it is not obvious by which it is first in an animal, whether by the heart or something else of this kind, for some people argue that the first instrument of perception is the brain and others that it is the heart. But sleep is the rest of sensory operations. When the subject of sleep is known, one should ask by what sleep is caused as its first cause – by vapours from food, work, or something else of this sort. Then one should consider which passion the sleep is, in that by which it is first in an animal, not in the whole animal, for sleep is some sort of immobility and this belongs to an animal by some first factor which is the subject of this passion. This first factor should be included in the definition of sleep, as any accident is defined by the property of its first subject. (Thomas Aquinas, *In duodecim libros Metaphysicorum Aristotelis expositio* VIII.4 (1745))

c. Sleep comes as follows: when one has eaten, the food is heated and digested by heat which originally comes from the heart. This heating makes a vapour come from the food. Because of its warmth and fineness, the vapour ascends into the head and then, because of the coldness of the brain, they become colder and coarser and, therefore, they turn naturally back downwards. When they meet the heat of the heart they are diffused to exterior parts of the body and they push the heat of the heart and the spirit to the seat of the heart intensifying the heat in the digestive area so that the digestion of the food will be completed. Because of this reversion of the internal heat the external sensory organs do not sufficiently receive heat and spirits for sensory acts. Therefore the senses do not function and the common sense cannot perceive through external organs. This is sleep, and an important factor in sleep is also the obstruction of the veins and vessels by the coarse vapours so that the sensory spirits cannot freely move to exterior organs. Coming to be in this way, sleep is a natural phenomenon, not a defect of nature. (John Buridan, *De somno et vigilia*, ed. Lokert (Paris 1518) q. 5)

The idea of vapours of digestion as the cause of sleeping was adopted from the ancient Aristotelian and medical tradition. To the Latin West it became largely known through the influential medical treatise *Pantegni* (V.33), which considered it through a brain-centered view of perception (Ricklin 1998, 103–104; on the brain-centered view of perception, see above p. 66). William of Saint-Thierry presented a similar view, mentioning also the role of the cavities of the brain (**a**). Thomas Aquinas notes that there are two different views of the primary organ of sleep: brain and heart. According to him, the definition of sleep depends on what one considers as the primary organ (**b**). John Buridan exemplifies a heart-centered view, where the brain has a mere cooling function in sending the digestive vapours back down towards the heart. The actual ceasing of the sensory operations takes place when the internal heat and sensory spirits do not flow from the heart to the sense organs as in a waking state. Immediately after this description of natural sleep, Buridan describes sleep which is caused by the deprivation of food, which likewise causes the lack of natural heat and spirits in the organs of senses (**c**).

2 Classification and Causes of Dreams

a. There are altogether five types of things which appear to sleeping persons. These are: the oracular saying, the vision, the dream, the nightmare and the apparition. Oracular saying takes place when, in a dream, one of our parents, or some other holy and respectable person, or a priest, or even God himself, announces openly that something is to take place or is not to take place, or that something is to be done or is to be avoided. A vision has occurred when something occurs exactly as it had appeared in a dream. A dream is something enveloped in figures which cannot be understood without interpretation. A nightmare occurs when something has worried a waking man and returns to him when he is asleep. This can be worry concerning food or drink, some pursuit, profession or infirmities.

Everyone dreams according to one's pursuits, and the skills of individual arts recur in dreams as they are imprinted in the mind. Dreams differ according to one's infirmities. They also vary according to the diversity of one's customs and humors. The sanguine dreams different dreams than the choleric, phlegmatic or melancholic. Others see red and coloured dreams, while melancholics dream in black and white.

An apparition occurs when one who has barely begun to sleep, and still thinks he is awake, seems to see men rushing down upon him or sees differing forms wandering about, which may be either pleasing or disturbing. To this class belong ephialtes, which is popularly said to attack the sleeping and burden the victims with its weight. It is nothing other than a certain gaseousness which rises from the stomach or the heart to the brain and there oppresses the animal power. (Anonymous, *Liber de spiritu et anima* 25)

b. How does it happen that while asleep a human being sees as if perceiving by five senses, without there being present anything extrinsic to be sensed? It takes place through a movement, which is contrary to the one taking place while one is awake. While awake, the external sensibles move the sense, and the common sense moves the imaginative power. While asleep, when the imaginative power imagines the intention which it has received from outside or from the recollecting power, it returns and moves the common sense and the common sense moves a single sense. So it happens that a human being perceives sensibles, although they are not external, since their intentions are in the organs of the senses regardless of whether they come from outside or from inside... The movement of the imagination is directed thus in sleep, since the connection to the cogitative faculty is disengaged. (Averroes, *De somno et vigilia* 98–99)

c. The senses of those who sleep are bound because of vapours and fumes, as is stated in the book *On sleep and waking*. The ligament of the senses can be more or less intense depending on the nature of the vapours. When the movements of the vapours are abundant, it is not only the senses which are bound but also the imagination, with the consequence that there are no phantasms. This often happens when one begins to sleep after having plenty of food and drink. But if the movements of the vapours are less intense, there may be phantasms, although they are distorted and inordinate like the phantasms of those with a fever. And if the

movements are still less intense, ordinate phantasms may appear, as in the last part of sleep of healthy people who have a strong imagination. (Thomas Aquinas, *Summa theologiae* I.84.8)

Already the early Byzantine philosopher Priscian of Lydia (*Solutiones ad Chosroem* III.61) considered four possible ways by which dreams are related to our daily operations: as causes, as signs, as consequences or as coincidences (Ricklin 1998, 100). Following Galenist tradition, the medical treatise *Pantegni* (X.2) enumerated different kinds of dreams as signs of certain illnesses. The correspondence between particular dream contents and illnesses, such as the melancholic dreaming dark things or the phlegmatic moist things, was explained by bodily humors. Accordingly, the changes of humoral constitution during seasons of the year or during one's lifetime could intensify the effects (Ricklin 1998, 105–106). Michael Psellos, an eleventh-century Byzantine philosopher, admitted the influence of both daily experiences and humoral constitution on dreams. He noted that even one's profession affects dreams, so that philosophers dream philosophical dreams, rhetors rhetorical, and geometers of geometrical things (*De omnifaria doctrina* 116, see Ricklin 1998, 273).

The influential twelfth century *Liber de spiritu et anima* transmitted ancient ideas of dreams to medieval Western philosophy. Its classification and description of the causes of different types of dream content (oracular saying, vision, dream, nightmare, and apparition) was based on Macrobius' fivefold division in *Commentariorum in somnium Scipionis* I.3.2. According to *Liber de spiritu et anima*, different temperaments cause different kinds of dreams (a). See also *ibidem* 24. In addition to western commentaries of Macrobius, the fivefold division was also known to Byzantine philosophers (Ricklin 1998, 258–259; 266; 281). John of La Rochelle (*Summa de anima* 100) elaborated this scheme further and added good and evil spirits as causes of dreams; the former cause knowledge of hidden things. (On prophetic dreams, see (3) below.) Averroes explains the experience of dreaming by the changed state of the internal senses of imagination and cogitation during sleep (b). Quoting this passage, Albert the Great states that 'dreaming is in itself nothing but taking a phantasm as an object of perception in the common sense'. According to Albert, this applies also to lucid dreaming, where a person is aware that he or she is dreaming. Even in such a case a phantasm does not appear as an object of imagination, but as an object of perception, although the person perceives the illusion through the cogitative or intellectual faculties (Albert the Great, *De homine* 45.1 (412)).

A similar description, where dream images are said to be caused by perceptual impressions retained in the soul, is found in Thomas Aquinas (*Summa theologiae* I.3.3). On the physical causes of dreaming, see also the text from

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William of Saint-Thierry above (2a). Aquinas explains the variations in dreams by referring to the various amounts of digestive vapours present in the organ of imagination. In the beginning of sleep, intense movements of the vapours cause dreamless or inordinate sleep, whereas towards the end of the sleep, movements gradually cease enabling dreams to become more orderly (c). Similar thoughts can be found already in twelfth century writer Adelard of Bath (*De eodem et diverso*, 13), and may date back to early Byzantine philosopher Priscian of Lydia (see *Solutiones ad Chosroem* III.62). On these authors, see Ricklin 1998, 87–90.

3 Dreaming and Prophecy

a. Both kinds of prophecy [natural and supernatural] differ from dream and vision. We call a dream an apparition which appears to a sleeping person, and a vision that which appears to a person awake, but deprived of the senses. Both in dream and in simple vision the soul is kept away completely or partially by phantasms, which are seen, so that the soul, completely or partially, adheres to them as to things which are true. However, in both forms of prophecy some phantasms may be seen in sleep or in a vision, but the soul of the prophet is not kept away by the phantasms. Instead, it knows through the prophetic light that the objects which it sees are not things, but likenesses which signify something. And it knows their signification, as Daniel (10:1) says: ‘There is need of understanding in a vision.’ So it is clear that natural prophecy is a middle ground between dream and divine prophecy. Therefore a dream is said to be a part of or an instance of natural prophecy, in the same way that natural prophecy is a kind of imperfect likeness of divine prophecy. (Thomas Aquinas, *Quaestiones disputatae de veritate* 12.3)

b. There are two things to be considered regarding the cognition: reception and judgement about that which is received. The judgement about the received things is better in the one who is awake than in a sleeping person, since the judgement of one who is awake is free, whereas the judgement of one who is asleep is bound, as is said in *De somno et vigilia*. But as regards reception, the cognition of the sleeping person is better, because the resting senses perceive the internal impressions caused by the external movements more intensively, whether they come from the separated substances or from the heavenly bodies. In this sense we can understand that which is said of Balaam in Numbers (24:16): ‘who falling,’ that is, sleeping, ‘hath his eyes opened.’ (Thomas Aquinas, *Quaestiones disputatae de veritate* 12.3 ad 1)

c. Subtlety of soul, which according to Gregory is a cause of foreknowledge of future things, should be taken to mean that aptitude of the soul to receive something from the separated substances. This does not only take place according to the order

of grace, when certain things are revealed to holy people by angels, but also according to the order of nature, as lower intellects are according to the order of nature apt to be perfected by the higher ones, and as human bodies are subject to the impressions of the heavenly bodies, which contain a provision for some future events, which the soul in the state of subtlety foresees through certain likenesses, which the impression of the heavenly bodies has left to the imagination. (Thomas Aquinas, *Quaestiones disputatae de veritate* 12.3 ad 5)

The Arabic version of Aristotle's *Parva naturalia* suggested that veridical dreams were caused by God through active intellect in human imagination. Following this tradition Moses Maimonides and Averroes elaborated their views of the causes of veridical dreams (see Altmann 1978, 4–5). Many earlier western authors such as Pseudo-Bernard (*De modo bene vivendi*) and John of Salisbury (*Polycraticus* II.17) were against divination from dreams, even if the latter admitted that some dreams contain true signs, by which God warns his creatures beforehand (*Polycraticus* II.15). Along the lines of the Neoplatonist tradition of Iamblichus (see above p. 181), the Byzantine Michael Psellos stated that when the human soul is in sleep and unbound from its association with the body, it can either be released to an independent existence, or connected to the Nous, or even God. This process causes accordingly veridical dreams concerning future events, higher intelligences and divine attributes, or lastly super-intelligible realities. The false dreams are, by contrast, caused by the soul's intense merging with the body in sleep, which enables demonic influences (Ricklin 1998, 274–277).

Following Aristotle's authentic view (see above, p. 181), Albert the Great and Thomas Aquinas understood the veridical dreams in a naturalistic manner, as caused by higher intelligences other than God and distinguished from divine prophecy (see Altmann 1978, 6, 13). Aquinas considered dreaming of future events to be an inferior part of natural prophetic activity because of its lack of intellectual control. On the other hand, a sleeping person is receptive to external influences, whether they come from God, who causes divine prophecy or from the heavenly bodies, which cause natural prophecy. Despite this general openness to the prophetic nature of dreams, even he was still restrained concerning the practice of divination from dreams (*Summa theologiae* II-2.95.6).

4 Dreaming and Perceiving

a. Hence it is clear that sight is in the eye of someone who dreams to see, and hearing in the sense of hearing, and touch in the sense of touch, while the object is absent ... The vision and intuition, which occur in a dream, take place by means of

species and arrive in the eye from the imagination. It does not suppose the presence of a thing, because the objects are absent. Nonetheless, this is truly an intuitive cognition, as became clear above in many ways through the sayings of Augustine and the Commentator. (Peter Auriol, *Scriptum Super Primum Sententiarum*, prooemium 2.83; 112 (199, 206))

b. According to the usual course of nature, it is not possible that someone would have a singular concept of a thing, which neither is nor has been present to the senses ... It is argued that in a dream we have many singular concepts of what we have not perceived and, therefore, the claim is false. The antecedent is proved since we experience thoughts of many things of which we do not have previous cognitions. It will be responded that such concepts are not generated out of nothing, but they have been stored in phantasy. (Thuo of Viborg, *Disputata metaphysicae* 7.19 (ed. Tabarroni 199–200))

c. Dream has such a power and virtue that we would judge the thing as the dream represents it if the judgement of the superior faculty, namely the intellect, would not judge otherwise. It is similar to the case when one places a finger near the eye and when the eye changes its position, one thing appears as two. But if the higher faculty perceives or attends the change, it recognizes the error, namely that this thing is one and not two things. Similarly it happens in a dream, since by virtue of intellect we judge the things not to be in the manner that they appear in the dream. It happens sometimes that people who make very little or no use of reason are not able to correct the erroneous judgement of the senses. Therefore it happens that the fearful, the sick, children and foolish women often judge of having seen the dead and other terrifying things because of the movement of likenesses in the fantasy, being unable correct this erroneous judgement because of their deprived use of reason. (Jodocus Trutfetter, *Summa in totam physicen* VIII.2.3 (fol. Nn3r–v)).

Referring to our common experience of dreams, Peter Auriol argues that sensory intuitive cognition can take place also in the absence of the object of perception (**a**). Thuo of Viborg, a Buridianian philosopher, states that singular cognition in dreams is also based on sense perception (**b**). On the basis of Henry of Runen's treatment of the same question (Henricus Ruyn, *Disputata Metaphysicae* 7.15, ed. Tabarroni, 374) we may assume that the concepts which Thuo is referring to also include concepts of imaginary beings such as a golden mountain (Henry of Runen was Thuo's teacher). Jodocus Trutfetter's example, based on Aristotle's *De insomnis* 461b30–462a8, emphasises the function of the intellect in correcting erroneous perceptions, whose absence explains the power of dreams to present imaginary beings as really existing (**c**).

Chapter 13

Early Modern Theories

Tuomo Aho

Most authors in the Renaissance period still followed the Aristotelian and medical accounts of sleep. On the other hand, there were also thinkers who argued that sleep does not affect the highest spiritual part of the soul. Marsilio Ficino put forward this idea in his Neoplatonic philosophy, and it was repeated by representatives of occultist natural philosophy from Paracelsus to Fludd (1). The controversy about cognitive activity in sleep continued in the seventeenth century around Descartes's thesis that conscious thinking must go on even during dreamless sleep. He claimed that the intellectual soul must be thinking incessantly. This was not favourably received, and the empiricists regarded such a claim as obviously absurd (2).

Dreaming became a major philosophical topic because of the comparison between the experiences of people while dreaming and awake. Dreams were understood as perceptions, and this immediately raised the question of the difference between dreams and other experiences. Hence, the focus turns to epistemology: how can we know that our perceptual experiences are not dreams, and that the reality we suppose we perceive is not mere dream? This puzzle, the so-called dream-scepticism, became famous in early modern philosophical literature. Various answers were given, but the authors seem to have generally accepted the crucial association of dreams and perceptions (3).

Though the epistemological issue became dominant, philosophers paid some attention to the content of dreams. What are the causes which determine what is 'seen' or experienced in a dream (4)? Most philosophers thought that ordinary dreams – those with no supernatural intervention – result naturally from the physical and mental states of the organism. These states contain even effects of earlier impressions, and this would explain how some ideas reappear in surprising conjunctions in dreams. The familiar and popular literature of 'interpretation of dreams' was gradually displaced from philosophy.

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1 Renaissance Philosophers on Sleep

a. Hot and humid vapours ascend from the stomach to the brain, the coldness of which makes them denser, like the vapours in the area of air, and in the same way that such vapours often prevent the visibility of the light of the sun, these vapours prevent the diffusion of the animal spirits from the brain, and this causes the ceasing of operations which is sleep. (Suárez, *De anima* III.13.10)

b. If this is so, why should not the higher minds which are conjunct with our mind always move it? We are not aware of this impulse when our middle part is so much occupied with its own acts that the influence of the mind does not reach it. But when it is empty, what would prevent some angelic thinking from entering our rational powers, although we cannot see where it comes from? This is evident in those who, without a teacher, only by the intention of emptied reason or even in a calm state, have often discovered many outstanding things even without looking for them, as though the light of the sun were suddenly and spontaneously diffused through the serene air. (Ficino, *Theologia Platonica* XIII.2 (146))

c. Thus nothing is idle in nature. All things are at work from hour to hour, from day to day, from night to night. Only human beings rest at night and do not work at Sabbath because of the divine command. But the day of rest has not been ordained for the spirit which must not be idle and rest; it is established only for the rest of the body, as of the beasts of the field and whatever pertains to it. The spirit must always be at work, and neither sleep nor Sabbath can make it still and quiet. The same goes for all creatures. Even though their body rests, their spirit never stands still and continues to work each day. (Paracelsus, *Werke* I.13 (147))

In the Renaissance era, the Aristotelian explanation of sleep was often modified because of the dominant medical theory of the spirits and the brain-centred picture. Suárez puts forward the mainstream view of the closure of senses in sleep (**a**). He also argues that even though the intellect may form concepts in sleep, whether through divine influence or by turning to phantasms, reasoning does not function in sleep (*De anima* IV.7.5–6). According to Marsilio Ficino, the highest soul can be in contact with higher spheres and be informed by them when lower levels do not interfere; such cases can occur during sleep (**b**). The idea of spiritual ascent in sleep, when the disturbing external effects are excluded, fascinates Paracelsus (**c**) and other authors who combine mysticism with natural philosophy, for example Fludd; see Gantet 2010, chs. 1 and 3. Nothing like this was mentioned in the *Pantegni* or other traditional medical accounts, nor in Aristotle's *De somno* or its late ancient paraphrase by Themistius, which were much used.

2 The Sleepless Intellect

a. The reason why I believe that the soul is always thinking is the same that makes me believe that light is always shining even though there are no eyes looking at it, that heat is always warm even though it heats no one, that the matter or extended substance always has extension, and in general, that what constitutes the nature of a thing always belongs to it as long as it exists. Therefore it would be easier for me to believe that the soul ceases to exist when it is said to cease thinking than to conceive that it exists without thought. And I see no difficulty here, unless it is regarded as superfluous to believe that it thinks in case no memory of it remains in us afterwards. But if we consider that every night we have a thousand thoughts, and even awake a thousand thoughts in an hour, which leave no more trace in our memory and seem no more useful than the thoughts we may have had before our birth, it is easier to be convinced of this than to judge that a substance whose nature is to think can exist without thinking. (Descartes, Letter to Gibieuf, 19 January 1642, AT III, 479)

b. Who can find it reasonable, that the Soul should, in its retirement, during sleep, have so many hours thoughts, and yet never light on any of those *Ideas* it borrowed not from *Sensation* or *Reflection*, or at least preserve the memory of none, but such, which being occasioned from the Body, must needs be less natural to a Spirit? ...

I would be glad also to learn from these Men, who so confidently pronounce, that the humane Soul, or which is all one, that a Man always thinks, how they come to know it; nay, *how they come to know, that they themselves think, when they themselves do not perceive it.* (Locke, *An Essay concerning Human Understanding* II.1.17 and 18)

Descartes said vaguely that a man falls asleep when animal spirits are insufficient at some brain canals (*De l'homme*, AT XI, 173). But this does not concern the intellectual soul. Gassendi pointed out that incessant thought is an inevitable consequence of Descartes's premisses (*Meditationes*, AT VII, 264). That was absurd for him, but Descartes made clear that it indeed was his intention (**a**). 'You say you want to stop and ask whether I assume that the soul always thinks. But why should it not always think, when it is a thinking substance? Is it so strange that we do not remember the thoughts which the soul had in mother's womb or in deep sleep ...' (356). This did not convince even all of his adherents. For instance, Arnauld asked if it would not be enough that the soul preserves its ability to think at every moment, but Descartes emphasised that actual thought is necessary (Letter 4 June 1648, AT V, 193). Locke's chapter II.1 contains a strong attack against the Cartesian thesis (**b**). 'Thus, methinks, every drowsy Nod shakes their Doctrine, who teach, That the Soul is always thinking' (II.1.13). Though the original thesis was abandoned, an analogical issue appeared as the question whether a sleeper must always dream. (Kant, at one stage, thought so (*Anthropologie*, Akademie-Ausgabe VII, 190).)

3 Dreaming or Awake?

a. As if I were not a man who sleeps at night, and who often has all the same experiences in dreams as madmen do when awake, or sometimes even less likely ones. How many times has it happened that I have been convinced, in nightly rest, that I am in this place, dressed in gown, sitting by the fire – when in fact I am lying undressed in bed! Yet at this moment I am certainly looking at this piece of paper with vigilant eyes; this head which I move is not asleep; I stretch out and feel my hand deliberately and knowingly. What happens to someone asleep would not be so distinct. But do I not remember that I have also been deceived in other occasions by similar thoughts while asleep! Thinking about this more carefully, I see so plainly that there are no sure signs by means of which being awake can be distinguished from being asleep, that this astonishes me, and this very embarrassment almost reinforces the thought that I may be asleep.

Let us suppose then that we are dreaming, and that these particulars – that we open our eyes, that we are moving our heads and stretching out our hands – are not true. Perhaps, indeed, we do not even have such hands nor such a whole body at all. (Descartes, *Meditationes de prima philosophia* I, AT VII, 19)

b. It must indeed be admitted that the criteria of real phenomena thus far offered are not demonstrative, even taken together, although they have the greatest probability, or popularly speaking, they provide moral certainty, but do not establish metaphysical certainty so that the contrary claim would imply a contradiction. Thus it cannot be absolutely demonstrated by any argument that bodies exist, and nothing prevents certain well-ordered dreams from being the objects of our mind, which we judge to be true and which, as regards practical matters, are equivalent to truth because of their accord with each other. (Leibniz, *De modo distinguendi phaenomena realia ab imaginariis*, Akademie-Ausgabe VI:4 B, 1502)

Descartes expressly supposes that dreams are actual perceptions. (This is in contrast with the earlier tradition, see Aristotle, *De insomniis* 1, 458b9, 459a1.) Early modern philosophers seem to follow the same line. ‘It is no wonder that dreams, as long as they last, are taken as true experiences of real things. Because they are then the strongest ideas in the soul, they are in the same position as perceptions when one is awake’ (Kant, *Versuch über die Krankheiten des Kopfes*, Akademie-Ausgabe II, 264). The famous quotation (**a**) from Descartes’s First Meditation, the so-called dream argument, is often repeated in later debates. Descartes’s question is basically the same as the one that was posed in Plato’s *Theaetetus*. (Hobbes underscores the venom of his objections by pointing out this similarity at the very outset (AT VII, 171).)

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Descartes's own answer to his question is rather flat: 'I now notice that there is a vast difference between [being asleep and being awake], in that memory never connects dreams with all the other actions of our life, as it connects the events which happen when we are awake. Indeed, if someone, while I am awake, quite suddenly appeared to me and then disappeared at once, as happens in sleep, so that I could not see where he came from or where he went to, I would have reason to judge that he was a ghost, or a phantom created in my brain, rather than a real man. But when some things appear of which I know distinctly whence, where and when they come to me, and when I can connect the perceptions of them with the whole of the rest of my life without any interruption, then I am quite certain that when I encounter them I am not asleep but awake' (*Meditationes* VI, AT VII, 89–90). Hobbes already makes the crucial objection that all the confirming evidence could be duplicated in dream as well (AT VII, 195–196). According to Bourdin, even seemingly self-evident principles could be mere dreams (AT VII, 494–495). Apparently Descartes needs theistic assumptions here. Concerning the dream argument, see Markie 1981; Hanna 1992; Newman 1994; Dumora 2005, ch. 6; Chynoweth 2010.

Leibniz observes that no answer to Cartesian dream-scepticism can be strictly demonstrative, but he sees no serious problem here (**b**). In an earlier fragment *De somno et vigilia* he describes some features of sleep and waking with a reference to the connected course of waking consciousness, like Descartes, and adds: 'In dreams we do not grasp this connection when it is present, nor are we surprised when it is absent' (Akademie-Ausgabe VI:2, 277). For Wolff's further argumentation see Carboncini 1991, 123–153. See also Wahl and Westphal 1992; about proposals concerning dream as half-consciousness see Gantet 2010, ch. 7.2.

4 Explanation of Dreams

a. It seems to us that it is proper to divide dreams into divine, demonic, natural, and animal. Divine dreams are those which are inspired by God, either immediately by God or with the mediation of angels, as often happens. There are many examples of this in Scripture, both in the Old and New Testament ... Those dreams are called demonic which are induced by demons. They can cause them in the same way as angels ...

Those dreams are called natural which have their origin in affections of the body, temperament, movements of humours, and something like that ... Those dreams are called animal which revolve around the things which have occupied us during the day. The simulacra of recent things move us most ... To this genus belong also the

dreams of things or persons towards which we feel vehement hate, love, fear, or hope. (*Commentarii Collegii Conimbricensis in Parva Naturalia*, De somniis 4 and 5)

b. Finally, I took my usual and surest way of escape, and went to bed, after true and eager prayer that divine providence would let my good angel to appear, and instruct me in this troublesome case, as had many times happened before, and this, praise God, also took place to my best and to the true and hearty warning and improvement of my neighbours. When I hardly had fallen asleep, it seemed to me that I lay in a dark tower with innumerable other people bound with heavy chains ... (Andreae, *Chymische Hochzeit Christiani Rosencreutz* (259–260))

c. Now 'tis no wonder if a Discourse of such *sublime Subjects*, as the Entertainments of our *Souls* (during the Body's Nocturnal Repose) when they having shaken off for a time the Fetters of the Senses, are *upon the Wing* in the Suburbs of *Eternity*; of the *secret Intercourses of Spirits* with Humanity, and the *wonderful Communications* of the *divine Goodness* to his Servants in *Dreams* and *Visions*; 'Tis nothing strange, I say, if such discourses seem very uncouth and extravagant ... I have some hopes that this discourse may be both acceptable, and in some kind useful. (Tryon, *A Treatise of Dreams and Visions* (3))

d. A dreame is nothing els but a bubbling scum or froath of the fancie, which the day hath left undigested, or an after-feast made of the fragments of idle imaginations. (Nashe, *The Terrors of the Night* (355))

e. The imaginations of them that sleep, are those we call *Dreams*. And these also (as all other Imaginations) have been before, either totally, or by parcells in the Sense. And because in sense, the Brain, and Nerves, which are the necessary Organs of sense, are so benumbed in sleep, as not easily to be moved by the action of Externall Objects, there can happen in sleep, no Imagination; and therefore no Dreame, but what proceeds from the agitation of the inward parts of mans body; which inward parts, for the connexion they have with the Brayn, and other Organs, when they be distempered, do keep the same in motion; whereby the Imaginations there formerly made, appeare as if a man were waking ...

And seeing dreames are caused by the distemper of some of the inward parts of the Body; divers distempers must needs cause different Dreams. And hence it is, that lying cold breedeth Dreams of Feare, and raiseth the thought and Image of some fearfull object (the motion from the brain to the inner parts, and from the inner parts to the Brain being reciprocally:) And that as Anger causeth heat in some parts of the Body, when we are awake; so when we sleep, the over heating of the same parts causeth Anger, and raiseth up in the brain the Imagination of an Enemy ... In summe, our Dreams are the reverse of our waking Imaginations; The motion when we are awake, beginning at one end; and when we Dream, at another. (Hobbes, *Leviathan* I.2 (6))

f. And *Dreaming* it self, is the having of *Ideas*, (whilst the outward Senses are stopp'd, so that they receive not outward Objects with their usual quickness) in the mind, not suggested by any external Objects, or known occasion; not under any Choice or Conduct of the Understanding at all: And whether that, which we call *Extasy*, be not dreaming with the Eyes open, I leave to be examined. (Locke, *An Essay concerning Human Understanding* II.19.1)

g. The creator has given us a daily experience of how little the things in our machinery are inseparable from us and from each other: it is the brother of death, the balsamic sleep. The touch of its tender finger cuts away the most important functions of our life; nerves and muscles rest, sensory perceptions cease, and yet the soul still thinks in its own region. It is not more separate from the body than it was when awake, as the mixing of sensations in dreams shows, and yet it proceeds according its own laws even in deepest sleep ... The sensations of dream are more living to us, its affects more fiery, the connections of thoughts and possibilities become easier then, our sight is sharper, the light surrounding us is more beautiful. When we are healthy and dream, our walking often becomes like flying, our figure is taller, our decision more strong, our action more free. (Herder, *Ideen zur Philosophie der Geschichte der Menschheit* I, 5.4.4)

All early modern thinkers seem to agree that dreams really occur in sleep; thus they are not errors of memory, as some recent philosophers suggest. The problem is what brings about such events. The traditional received view claims that there are exceptional dreams of supernatural origin, but that most dreams are naturally caused: they either have simple organic or physiological causes, or they result from recent mental states (**a**). Many authors, beginning from Agostino Nifo, investigated and classified the connections between physiological causes (such as diets and bodily humours) and dreams. See Dumora 2005, ch. 3. Books of dream interpretation were popular in the sixteenth and seventeenth centuries, and ancient works of Galen, Artemidorus and Synesius were consulted for that purpose. Supported by biblical evidence, there persisted a more or less occultist faith in the possible supernatural information of dreams; one example is quoted from the Rosicrucian Andreae (**b**). The background of this tendency is seen from the full title of the book of Thomas Tryon quoted in (**c**): ‘A Treatise of Dreams and Visions, wherein the Causes, Natures, and Uses of Nocturnal Representations, and the Communications both of Good and Evil Angels, as also departed Souls to Mankind, Are Theosophically Unfolded, that is, according to the Word of God, and the Harmony of Created Beings.’ There were also works which opposed dream interpretation as such, for example Thomas Nashe’s anti-demonological *The Terrors of the Night* (**d**). See also Holland 1999. An advantage of Hobbes’s mechanistic theory of imagination (see p. 164) is that it can easily be extended to dreams, which become a special type of imagination (**e**). The famous British empiricists do not tell much about dreaming. Locke’s remark (**f**) does not actually explain it, but it is interesting because of the satirical insinuation about ecstasy. The prevalent explanation was naturalistic, and eighteenth-century philosophy was not very interested in dreams before a particular shift, represented here by Herder in (**g**). He anticipates the romantic fashion of admiring the supposed powers of dream. In romantic literature dream becomes a conventional favourite theme that is mentioned in numerous contexts. The underlying sentiment is that dreams can reveal some spheres of reality which are hidden from waking minds.

Part V
Memory and Recollection

Chapter 14

Ancient and Medieval Theories

David Bloch

Memory and recollection have always been important in very different areas of human experience, and this has profoundly influenced the history of these concepts. Because of this, different traditions of memory and recollection have existed throughout the history of ideas, sometimes taking parallel courses, at other times intersecting with and influencing each other. A purely philosophical tradition was shaped in particular by, and with constant reference to, Plato and Aristotle, and this tradition created different concepts to be used in the philosophy of mind (1–5) and the philosophy of science (6). A rhetorical conception of memory was shaped in a second tradition by ideas like the ones that we find in Cicero's works and in the *Rhetoric to Herennius* (7), but, in contrast with the other views on memory, this was not a dynamic conception, and it remained basically unaltered throughout Antiquity and the Middle Ages. Finally, an ethical tradition that treated memory as part of human prudence had many different sources of inspiration, but perhaps the most important were Plato, Cicero, Neoplatonic authors and Augustine (8).

The central problem of defining memory and recollection and their roles in the human cognitive apparatus was addressed by many thinkers of both Antiquity and the Middle Ages (1–2). Plato and Aristotle agreed that memory (*mnēmē*) and recollection (*anamnēsis*) were different, but whereas Plato and later thinkers and interpreters often blurred the distinction, Aristotle upheld it rigidly. According to Plato, recollection is nothing less than true learning, that is, the process of obtaining knowledge. The soul works independently of the body, and is then able to recall things previously experienced – whether in this life or in some pre-existence. Aristotle agrees that recollection is a capability found in the thinking part of human beings, but he does not accept that the soul recollects anything other than experiences of its present life (1). On memory, on the other hand, Plato is not completely clear;

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for in his writings memory is sometimes retention, sometimes awareness of an internal image, and the neoplatonist Plotinus also seems to operate with a rather broad concept of memory. Aristotle defines it clearly and narrowly: memory is *not* retention but an awareness of the internal image (1, 3). However, most thinkers after Aristotle accepted that memory should at least partly be used for retention, and the most common simile used for this kind of memory is a seal stamped in a block of wax. In the works of some thinkers, e.g. Avicenna and some twelfth- and early thirteenth-century Latin thinkers inspired by Avicenna, memory is simply a purely retentive faculty, but generally theories of memory from the early Stoics to the thirteenth century operated with a broad use of memory, which comprised several of the features inherent also in a twenty-first century conception of memory. Most importantly, this includes (i) the act of retrieving a piece of information that has been stored in one's soul but not identical with the process of recollection, (ii) various conceptions of retentive memory, and (iii) in a few cases, even a conception of unconscious memory (2, 3).

In addition to obtaining proper definitions of memory and recollection, an object of debate has also been memory and recollection's precise location and their objects. Aristotle defined memory as a capacity of the sensory soul, depending for its existence on sensation/perception, but some passages of his writings suggested to later philosophers that, even according to Aristotle, the intellectual soul also possesses the capacity for memory. In particular, in order to maintain consistency, Aristotle had to hold that memory of intellectual objects could only occur accidentally, since the intellect is not *per se* involved in the process. On the other hand, the Neoplatonists and Augustine claimed that there were two kinds of memory, one comprising objects of sensation and one comprising intellectual objects, while Avicenna and, apparently, Averroes agreed with Aristotle on this particular issue (4). The Latin Schoolmen generally followed Augustine's lead, but some at least admitted that this was contrary to Aristotle's authority, and the subject was much disputed. (See notes on 3e-f.)

Finally, regarding memory in general, the question of personal involvement of the remembering subject has sometimes been discussed: that is, must the subject remember *experiencing* the event for it to be memory proper? However, it is not until modern times that this becomes a standard question. Aristotle may have been the first to notice this feature of memory, and it was certainly of interest to some of the later medievals, notably Duns Scotus, William of Ockham and John Buridan, but it apparently did not receive much attention in Antiquity and the early Middle Ages (5).

In philosophy of science, also, Plato's and Aristotle's views on memory and recollection came to dominate later theories. Plato's theory of recollection explained an epistemological problem, and Aristotle in a similar vein used memory to account for the formation of universal concepts. In Plato's *Meno*, Meno presents the following famous paradox: if a person already knows what he is seeking, then there is nothing to learn; but if he does not know it, he has no way of recognising it, even when, or if, it presents itself to him. Known as 'Meno's paradox', this seems to demonstrate that true learning is impossible. Plato used recollection to solve this allegedly sophistical problem, stating that when one learns something what really happens is

that something experienced prior to this life is recollected. Aristotle did not accept that the soul exists before or after this life. Instead he used memory to account for the formation of universal concepts, and also to explain how we obtain first principles. What Aristotle describes is something like a flow-chart structure proceeding from sensation via memory to experience by which one arrives at universals, these being the means to scientific understanding. Later thinkers tended to adhere to one or the other of these two very different theories; occasionally, they even created a complex hybrid of the two. The members of one ancient group, whose thinking departed markedly from the traditional Aristotelian theories, are called Memorists (*mnēmoneutikoi*) (though whether they were known by this name in their own time is uncertain). Writing before the first century CE, they take the strong view that memory with the use of perception is really all there is to knowledge. This theory involved a greatly enlarged concept of memory, and did not truly gain ground until much later, most notably among the British empiricists. However, even the Memorists bear marks of the traditional frameworks laid by Plato and, to a lesser extent, Aristotle (6).

The importance of oratory in both Greece and Rome ensured the development of yet another kind of memory, viz. the kind found in rhetorical theory, since a good speaker had to memorise his speech. In the tradition, this kind of memory came to be known as ‘artificial memory’ (*memoria artificiosa*), that is, a particular kind of memory which is trainable in ways that natural memory (*memoria naturalis*) is not, and it also became influential in more philosophically orientated thinkers. The basic ideas about the artificial memory have Greek models, but are perhaps most clearly articulated in the *Rhetoric to Herennius*. However, even in highly philosophical theories, such as those of Aristotle, Augustine and Albert the Great, the influence of a rhetorical tradition is often evident. The central feature of this kind of memory is mnemonic theory, involving ‘places’ (Greek *topoi*; Latin *loci*) and mental images. It is the practical element which is stressed, that is, how one trains the memory to do the things it needs to do, and so definitions and conceptual distinctions of memory and recollection are not felt to be necessary. When such technical elements are stated, they are limited to general terms, and no discussions about a more precise definition can be found (7).

Finally, memory and recollection found a place in ethical theories in both Antiquity and the Middle Ages. Ethics was already a natural function of Plato’s theory of recollection, since according to Plato, one should recollect in particular objects such as goodness, justice, and other ethical forms (*eidē*). However, in the tradition of memory and recollection as ethical concepts, some remarks by Cicero became particularly influential. According to him, memory, along with intelligence and foresight, is part of prudence, and therefore it obviously belongs in ethical theories (it should be noted that the views are put forward in *On Invention* – a work on rhetorical theory). In Cicero’s opinion, memory is simply needed to help prudence judge what is good and what is bad by using past experiences as a guide to moral conduct. This idea was developed by later thinkers, some of whom tried to connect it with Platonic and, in particular, Aristotelian ideas (8).

It is fair to say, then, that memory and recollection were not always conceptually clear in Antiquity and the Middle Ages. Philosophers drew ideas from many different kinds of sources, and the results were often confused and extremely broad concepts of memory and recollection. In many ways this confusion is still with us today, although philosophers, psychologists and scientists embrace the possibility of interdisciplinary research on these topics, rather than trying to define their own way out of the problems.

1 Definitions of Memory and Recollection in Plato and Aristotle

a. Socrates: Since, then, the soul is immortal and has been born again many times, and has seen all things both here and in Hades, there is nothing that it has not learned. Therefore, it is no wonder that it is able to recollect the things that it previously knew concerning virtue and other things. For since all nature is alike, and the soul has learned all things, there is nothing to prevent a man from rediscovering all other things by recollecting just one object – which is what human beings call ‘learning’ – if one is courageous and does not tire in the search; for searching and learning in general is recollection. Therefore, there is no need to yield to the sophistical argument; for it will make us idle, and it is weak people who enjoy listening to it; but the other argument makes us active and inquisitive. Placing my trust in this, I would like to examine with you what virtue is.

Meno: Yes, Socrates! But what do you mean by saying that we do not learn, and that what we call learning is rather recollection? Can you teach me how this is so?

Socrates: Did I not tell you just before that you are a rascal, Meno? And now you ask whether I can teach you, even though I claim that there is no such thing as teaching, but only recollection; surely you do so in order to make me immediately and clearly contradict myself.

Meno: No, Socrates. I swear that this was not my intention; I did so by the force of habit. But if you can somehow prove to me that things are as you say, then please do so. (Plato, *Meno* 81c5–82a6)

b. Socrates: In my opinion, it would be true, then, to call memory the preservation of sensation.

Protarchus: That is true.

Socrates: But would we not say that recollection differs from memory?

Protarchus: Perhaps.

Socrates: And does not the difference consist in the following?

Protarchus: In what?

Socrates: When the soul itself and as far as possible by itself, without involving the body, recovers things that it once experienced with the body, then we probably call this recollecting. Do you agree?

Protarchus: Yes!

Socrates: And also when it has lost the memory of either a sensation or of something learned and brings it back itself and by itself, we probably call all these recollections.

Protarchus: You are right. (Plato, *Philebus* 34a10–c3)

c. We have now stated what memory and remembering is, that it is the state of having an image, taken as a representation of that of which it is an image; further, we have stated to which of the parts in us it belongs, namely, to the primary faculty of sense, that is, to that faculty by which we sense time. (Aristotle, *De memoria et reminiscentia* 1, 451a14–17)

d. What he [Aristotle] says is this: memory is the state of having an image, this kind of image being a representation of some object from which the image has come into existence. For when one sees the image as a representation of something, then one remembers, and this kind of activity is memory. Memory, then, is the state of having an image taken as a representation of that of which it is an image. For the imprint that is in accordance with imagination is not sufficient, but there must be activity concerning the imprint and it must be like a representation. (Michael of Ephesus, *In Parva naturalia* 18.19–25)

e. It has been stated already in the previous discussions that the people who are good at remembering are not the same as those who are good at recollecting. And remembering differs from recollecting not concerning time, but in the fact that a lot of other animals also partake in remembering, but so to speak no known animal partakes in recollecting, except man. Now, the reason for this is that recollecting is like a sort of deduction; for the man who is recollecting deduces that he has previously seen or heard or experienced something of this sort, and this is like a sort of search. But this belongs naturally only to those who also possess the faculty of deliberation; for deliberating is also a sort of deduction. (Aristotle, *De memoria et reminiscentia* 2, 453a4–14)

f. Recollection is the renewal of previous memory after one has forgotten and thereby dissolved the coherence [of one's internal images]. Therefore, recollection is a kind of memory. (Michael of Ephesus, *In Parva naturalia* 18.32–19.2)

According to Plato, to recollect (*anamnēsthēnai*) is ‘what human beings call learning (*mathēsis*)’ (a). In the *Meno*, the theory of recollection is put forward by Socrates in an attempt to answer the paradox concerning learning that Meno put forward in the preceding part of the dialogue. (For background, see the historical description of memory and recollection above.) A theory of recollection is also put forward in *Phaedo* 72e–77a, in which it is furthermore claimed by Cebes, one of Socrates’ interlocutors, that (the Platonic?) Socrates often stated and used this theory. See also *Phaedrus* 246a–257b.

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In the *Philebus*, Plato represents Socrates as making a distinction between memory and recollection, which Protarchus, his interlocutor, finds acceptable, although by no means obvious *a priori* (**b**). For this definition of memory as the preservation of sensation (*sōtēria aisthēseōs*), which does not completely fit the analyses in the *Theaetetus*, see also **3a** below. For Plato's theory of recollection, see Scott 1995, 2006, 75–125; see Lang 1980 for a description of Plato's definition of memory compared to Aristotle's.

Aristotle's final definition of the memory (*mnēmē*) in his *De memoria et reminiscentia* says that memory is the state one is in when one actually and presently views an internal image (*phantasma*) which represents an object (**c**). Notice that, contrary to many interpretations of this passage, retention does not seem to be the essential feature. In his commentary on this passage, Michael of Ephesus seems to have understood this part of the theory well (**d**). Contrary to Aristotle, he does not carefully distinguish the different possible terms for memory, but he is explicit that the imprint itself is not sufficient to make memory; an activity which makes this imprint represent something is also needed. Interestingly, Michael does not seem bothered by the fact that his interpretation identifies memory both as a 'state (of having)' (*hexis*) and as an 'activity' (*energeia*). On this, see also Aristotle's *Metaphysics* V,24, 1022b4–10. On the interpretations of Aristotle and the philosophies of memory and recollection found in the Aristotelian commentators, cf. Sorabji 2005. For other literature, see Ross 1955; Sorabji 1972/2004; King 2004b; 2009; Bloch 2007.

Aristotle describes the difference between memory and recollection towards the end of chapter two (on recollection) of *De memoria et reminiscentia*. Although it became a disputed issue particularly in the Latin philosophical tradition, Aristotle seems to claim that memory and recollection are very different capabilities of the soul. Most importantly, recollection must belong to the rational soul, since it is essentially a kind of deduction, whereas memory belongs to the sensing soul (**e**). Michael of Ephesus, on the other hand, provides very close connections between memory and recollection in making the latter a species of the former (**f**), perhaps influenced by Platonic views (see **b**). This has always been a popular way to analyse recollection, both in the Greek and in the Latin tradition. For a similar, albeit much more sophisticated, modern interpretation of Aristotle, see Annas 1992b.

2 Medieval Definitions

a. Then there is the memorative and recollective capability. It is a capability that is placed in the hindmost ventricle of the brain, and it retains the un-sensed intentions of individual sense objects, apprehended by the capability of estimation. (Avicenna, *Liber de anima* I.5 (ed. van Riet, 89))

b. Remembrance is the return in the present of an intention apprehended in the past, while an investigation through remembrance is a search for this intention through the will to make it present after a period of absence. (Averroes, *Epitome of Parva Naturalia*, 48)

c. *Remembrance* is of a form that can easily be reintroduced, while a *rememorative investigation* is of forms that are difficult to reintroduce. (Averroes, *Epitome of Parva Naturalia*, 66)

d. Al-Ghazali says that memory is the preserver of the intentions that the estimative [faculty] apprehends, and thus it is the strong-box of intentions, just as the imaginative preserver of forms is the strong-box of forms. Further, Isaac says in his book on definitions that memory is apprehension combined with the search for things located in the soul. Further, Gregory of Nyssa defines memory in many ways in accordance with various philosophers, saying the following: ‘the memorative is the cause of memory and remembrance, and is also a repository.’ But, according to what Origen says, memory is imagination left by some sensation in accordance with the apprehending act, while Plato says that it is preservation of sensation and understanding, and John Damascene defines it as Gregory does, but adds that memory is preservation of sensation and understanding. (Albert the Great, *De homine* I.38.1 (185a–b))

e. We say that the term ‘memory’ is used in many ways, namely, for disposition and capability, and for the object (187a). [...] And the definitions mentioned above include different aspects of the nature of the memorative capacity. (Albert the Great, *De homine* I.38.1 (187b))

f. The capacity of recalling will preserve the species, and here I am speaking about the whole capacity that is required for recalling (for I am not concerned about whether there are two capacities, of which one preserves and the other recalls the species, or whether there is only one that has both acts). At the very least, it is required for recalling that the species of the object of the process be preserved. (John Duns Scotus, *Ordinatio* IV.45.3 [5])

Through Latin translations, the definitions of the memory by Avicenna and Averroes became important in Western Scholasticism. Even though their theories are very different, the Schoolmen did not always distinguish them properly from each other. Thus, Avicenna’s narrow definition was often combined with Averroes’ comprehensive account of memory, and this produced a much more flexible theory than Aristotle’s. In I.5 of *The Book on the Soul*, Avicenna describes among other things the internal senses, and memory is categorized among these (a). Its sole function seems to be a limited form of retention. Sensible forms (*formae*) are received through perception by the internal sense

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often called imagination, and it is here that they are stored. These forms may be further scrutinised by another internal sense, estimation (*aestimatio*), which extracts the intentions (*intentiones*) from the sensible forms, since intentions are entities present in the external object but not immediately accessible to the external senses. These extracted intentions are the only objects of memory (*memoria*), although it should be noted that the description of memory as ‘the memorative and recollective capability’ (*vis memorialis et reminiscibilis*) suggested at least to some Latin thinkers that memory did more than just store intentions. See also *Liber de anima* IV.1–3 for Avicenna’s extensive analyses of the internal senses. For further literature on Avicenna, see Rahman 1952; Gutas 1988; Hasse 2000; Bloch 2007, 145–153.

According to Averroes, remembrance (*rememoratio*, memory) is clearly more heterogeneous than the Avicennean memory. In his basic definition of remembrance, Averroes makes a distinction between *remembrance* and *investigation through remembrance* (recollection) (**b–c**). Even though these quotations indicate an active kind of memory by which a previously experienced object (an intention) is recalled, remembrance is also regarded as a retentive or storing memory (see **3e** below). Notice that the *versio vulgata* of Averroes’ *Epitome of Aristotle’s Parva Naturalia* generally uses the term *rememoratio* (‘remembrance’) to signify ‘memory’ instead of the more regular *memoria*. The use of ‘remembrance’ was at least potentially conceptually disturbing, since, on the authority of, for example, Albert the Great, ‘remembrance’ was also used for recollection (*reminiscentia* or *recordatio*). For different interpretations of Averroes’ theory of memory, cf. Coleman 1992, 401–415; Black 1996; Di Martino 2003, 2007; Bloch 2007, 153–166.

Albert the Great’s *De homine* (tract I, questions 38 (On memory) and 39 (On recollection)) is probably the single most informative source on thirteenth-century Western views on memory and recollection. In this part of the work Albert treats the question ‘What is memory?’, and (**d**) illustrates clearly that quite a few different definitions had been tried throughout the past. Of all the theories quoted by Albert, he accepts none wholesale, but he believes that all the theories contain some truth concerning memory (**e**). Consequently, memory becomes a very broad notion. In the passages following (**d**) and (**e**), Albert discusses the different theories; after (**e**), he categorises them on the basis of the distinction just made. *Capability* covers features such as using internal images to reconnect with the thing represented in the images and preserving the present, the past and the future. *Disposition* is a particular state of the memorative capability. And finally, in some cases (Albert mentions Cicero, see **8a** below) memory is defined solely with reference to its object. Judging from the works of other thirteenth century thinkers, it seems fair to say that this kind of heterogeneous conception of memory was common, although few articulated the similarities, differences, and the arguments for and against with Albert’s flair. It may also be noticed that the theory established in the *De homine* (*Handbook on*

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Man) is later used by Albert in his *De bono* to explain how memory is necessary in an ethical context (see also **8b** below). For literature on the *De homine*, see Hasse 2000; Anzulewicz and Söder 2004; Bloch 2007, 190–193.

The topic that Scotus discusses in the question from which (f) is quoted is, ‘Can the soul, when it is separated [from the body], recall objects of the past which it knew when it was connected [to the body]?’ Notice that he appears to be developing both the terminology and the conception of memory compared to his predecessors. Scotus uses the term *recordatio*, not *memoria*, and it is clear from his entire analysis that the former term covers several features of a capacity that we would rightly describe as ‘memory’. For further literature, see Wolter 1990, 98–122; Coleman 1992, 465–499; Wolter and McCord Adams 1993; Bloch 2007, 220–225.

3 Memory and Retention

a. Socrates: Now, for the sake of argument, I would like you to suppose that we have in our souls a block of wax: in some it is big, in others small; in some the wax is pure, in others it is dirty; in some it is hard, in others moist; but there are also those in whom it is well-balanced.

Theaetetus: Alright – I am doing that now.

Soc.: Let us say, then, that it is a gift from Mnemosyne, the mother of the Muses, and when we want to remember something that we see, hear, or think up ourselves, we hold the wax under the sensations or thoughts and thereby impressions are produced in it, just as we stamp impressions of seals. And if it makes an imprint, we remember and know, as long as the image is in the wax; but if it is erased or cannot make an imprint, we forget and do not know. (Plato, *Theaetetus* 191c8–e1)

b. Now, one might raise the difficulty how you remember that which is not present, since it is the affection that is present, while the thing is absent. For clearly one must think about that which is generated through sensation in the soul, that is, in that part of the body which contains it, as a sort of picture, and the state of having this we call ‘memory’; for the movement produces a sort of impression, as it were, of the sense-impression, similar to what is done by people using seals. (Aristotle, *De memoria et reminiscentia* 1, 450a25–32)

c. Since we say that sensations are neither impressions nor seal-stamps in the soul, we cannot in any way consistently say either that memories are retentions of things learnt or things perceived, the imprint of which has remained in the soul, for it was not there in the first place. Therefore, both would belong to the same argument: either it arises in the soul and remains there if one remembers, or, if one denies either one of these assertions, one must also deny the other. Now, those of us who

deny both will necessarily have to examine in what way each of these occurs, since we do not claim that the imprint of the sensible object arises in the soul and makes and stamps it, nor do we say that memory owes its existence to the imprint's remaining. (Plotinus, *Enneads* IV.6 (41).1, 1–11)

d. Memory must be assumed to exist not only in cases where one perceives, as it were, that one remembers, but also when [the soul] is disposed in accordance with previous experiences or sights. For it may well happen that someone, while unaware that he has a memory, still has it in himself more strongly than if he knew it. (Plotinus, *Enneads* IV.4 (28).4, 7–11)

e. Remembrance differs from preservation; for preservation is of that which was always in the soul, after it was apprehended, while remembrance is of that which had been forgotten. And thus remembrance is severed preservation, while preservation is continuous remembrance. (Averroes, *Epitome of Parva Naturalia*, 48–49)

f. Memory is a disposition, that is, a kind of dispositional preservation of an image; not, however, of the image *per se*, for this pertains to the imaginative faculty, but rather in so far as the image is a representation of something that was previously apprehended. (Thomas Aquinas, *In De memoria et reminiscentia* 3.273–278 (116b))

g. And those who are slow to receive are good at retaining the received objects, which constitutes being good at remembering. For remembering is just being good at preserving what has once been apprehended. (Thomas Aquinas, *In De memoria et reminiscentia* 1.71–75 (104b))

Plato distinguishes between the retaining faculty in our souls – a gift from the muses to help us remember when we want to – and the remembering itself, that is, inspecting the impressions in the soul (**a**). The retention itself does not seem to be an act of remembering (*mnēmoneusai*). The wax metaphor is a recurrent theme in later works on memory, see e.g. text **b** and Plotinus IV.6 (41), 14–21. For an analysis of **a**, see Burnyeat (1990), 90–105.

Aristotle's view (**b**; see also *De Anima* II.12) may not be opposed to Plato's theory in the *Theaetetus* (**a**); for Plato does not actually say that memory *is* retention. On the other hand, the Aristotelian view would not fit the one found in the *Philebus* (see **1b** above). According to Aristotle, the phenomenon described in the Aristotelian passages is *not* memory, but rather a part of the perceptual process (see also Plotinus' view, **c** below). For analyses of the Aristotelian passages, see the literature cited in the notes on **1** above.

Plotinus' assertion in the first of the quoted passages (**c**) is a reaction to, and a clarification of, previous theories of memory – Plato, Aristotle and, probably, Stoic views in particular. The general Plotinian theory of memory can be gathered from IV.3–4 and IV.6, in which he states, in apparent

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agreement with Aristotle, that memory is not simply retention; furthermore, he distinguishes between *thinking* memory and *imagining* memory (see **4c** below). Plotinus also provides one of the oldest indisputable examples of unconscious or habitual memory (**d**). Aristotle (*On Memory and Recollection* 2, 452b23–9) seems to deny this possibility. For literature on the central aspect of memory in Plotinus' philosophy, see Warren 1965; Blumenthal 1971, 70–74, 80–99; McCumber 1978. On the Stoic views on memory, as far as these are known, see Løkke 2004, 57–64.

On Averroes' theory (**e**), see also **2b–c** above. Although the distinction between memory and retention is an Aristotelian one, Averroes differs from Aristotle by stressing that there must have been a sort of gap in the retention before the process can be called remembrance. In this, it draws closer to, without actually being, recollection. Notice also that a little later (58–59) Averroes says that the sensible form which is found in the rememorative faculty is the finest and most spiritual (*magis spiritualis*), for at this stage of processing the sense impressions, only the essential features, the marrow (*medulla*), are left.

Aquinas (**f–g**) offers a commentary on, and an explanation of, Aristotle's definition of memory (**1c**). But whereas Aristotle considered the actual beholding of the image involved, Aquinas focuses primarily on the retention involved in memory (cf. Michael of Ephesus, **1d** above). This is particularly clear in **g**. It must, however, be noted that in reality Aquinas operated with a much broader conception of memory. His views on recollection were much closer to Aristotle than his views on memory. For analyses of Aquinas' commentary, see Coleman 1992, 444–460; Aquinas 1984; Bloch 2007, 195–207.

4 Sensitive and Intellectual Memory

a. Regarding the question as to which part of the soul memory belongs, it is, then, clear that it belongs to the same part as imagination; and those things that are essentially the objects of memory are also those of which there is imagination, while those that are accidentally objects of memory are those that do not occur without imagination. (Aristotle, *De memoria et reminiscencia* 1, 450a22–25)

b. It is not difficult to see that all the phenomena just mentioned [memory, among others] are common to both soul and body, because they are all connected to sensation: some occur accompanied by sensation, others through sensation, and some of these are affections of sensation; some are possessing states of it, some are means of protecting and preserving, others of destroying and losing it. (Aristotle, *De sensu* 1, 436b1–6)

c. Remembering is either thinking or imagining. (Plotinus, *Enneads* IV.4 (28).3, 6–7)

d. These [sensible objects] are not the only things that the immense capacity of my memory holds. Here are also all those precepts of the liberal sciences that have not been forgotten; they have been withdrawn, so to speak, to a place deeper inside – although, strictly speaking, it is not a place – and it is not images of the precepts that I carry, but the objects themselves. For what grammar is, what the art of disputation is, how many kinds of questions there are, and everything I know about all these issues is in my memory in such a way that I have not merely retained the image and left out the object. (Augustine, *Confessions* X.9)

e. Memory is part of the sensing soul and not of the rational soul *per se*. (Albert the Great, *De bono* IV.2.1 (245a))

f. Memory, insofar as it is mixed with recollection, belongs more to the rational soul than to the sensing; for recollection is like a kind of deduction, as the Philosopher [Aristotle] says, and thus it is then a disposition of the rational soul. (Albert the Great, *De bono* IV.2.1 (246a))

g. The situation is this: if memory is understood solely as a power that preserves species, we must claim that memory is in the intellectual part. But if we also include in the notion of memory that its object is the past as past, then memory will not be in the intellectual part, but solely in the sensing part which apprehends particulars. (Thomas Aquinas, *Summa theologiae* I.79.6)

According to Aristotle, imagination belongs to the sensory part of the soul. Therefore, the essential objects of memory (and imagination) are sensibles. We do remember thoughts and intellectual objects, but this is always done through the use of images (*phantasmata*). Therefore, these are only accidentally remembered as additional phenomena following upon the images (**a**). The complete dependence of memory on sensation is stressed in the passage from *De sensu* (**b**). Later commentators (like Aquinas) often used *De anima* III.4, 429a27–29, in which Aristotle called the soul ‘the place of forms’, as evidence that Aristotle also had a conception of intellectual memory. However, there is nothing in this passage to indicate that Aristotle would call this memory.

In characterizing remembering (*to mnēmoneuein*) as thinking (*noein*) or imagining (*phantazesthai*), Plotinus uses the word ‘or’ in its weak, non-exclusive sense (**c**). Apparently, the thinking kind of memory is (Neo)Platonic recollection (*anamnēsis*), while the imagining memory is memory proper (*mnēmē*). See Warren 1965; McCumber 1978; King 2009.

Memory is a central and broad notion in Augustine which combines intellectual and sensory retention and recollection (**d**). For intellectual memory in Augustine’s writings, see also *On the Trinity* X.11–12, in which he equates memory (*memoria*), intelligence (*intelligentia*) and will (*voluntas*), these being placed in the

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human mind (see also **f–g**). For more on Augustine’s theory of memory, see Coleman 1992, 80–111; O’Daly 1997, 411–415, and 427; Taske 2001.

Both statements quoted from Albert the Great’s *De bono* are parts of the question *On the Parts of Prudence* (**e–f**). The first quotation is, Albert says, a problem for Cicero, who wants to make memory a part of prudence (see **8a** below); the second quotation provides the solution to the problem. See also **8b** below.

Thomas Aquinas explains that if memory is taken as preserving intelligible species (*vis conservativa specierum*), it is an intellectual power, but if it pertains to past things as past, it is a sensory faculty (**g**). See also *In De memoria et reminiscencia* II.249–252 where Aquinas, having just argued in accordance with Aristotle that memory belongs to the sensory soul, suddenly states that some (i.e., Augustine) believe that memory belongs to the rational part of the soul. For further literature, see Coleman 1992, 422–443.

5 Personal Memory

a. However, when one has knowledge and sensation without performing these actions [that is, without actually thinking or sensing], then one recalls (in the case of knowledge, because one has learned it or contemplated it; in the case of sensation, because one has heard or seen it or sensed it in some other way); for it is always the case that when a person actualises as regards his memory, what he does is say in his soul that he previously heard, sensed or thought about this. (Aristotle, *In De memoria et reminiscencia De memoria et reminiscencia* 1, 449b18–24)

b. I consider certain that there can be in us an act of knowing the past as an object, and I add that this act, which is called ‘remembering’, is not immediately about some past object, but only about some act that (1) was in the remembering subject itself, and (2) was in him as a human act (this latter condition excludes acts of the vegetative soul, coincidental acts, and, more generally, all imperceptible acts). For the only reason I remember the fact that you were sitting, is because I remember that I saw or knew that you were sitting. Thus, even though I know, for instance, that I was born, and that the world was created, still I do not *remember* either of these events, since I am not aware of any act of my own in the past which was involved in either of these events. (John Duns Scotus, *Ordinatio* IV.45.3 [4])

The passage from Aristotle (**a**) has often been taken as solid evidence that, in modern terminology, personal (or episodic) memory was, according to Aristotle, the true kind of memory. One should note, however, that Aristotle does not usually use ‘recalls’ (*memnētai*) for ‘remembers’, and similarly the

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words that I have translated with the awkward phrase ‘actualises as regards his memory’ (*energē kata to mnēmoneuein*) do not simply constitute a description of memory (see the introduction above). Thus, it is uncertain whether or not Aristotle himself would consider the process described in this passage memory. For literature on personal memory in Aristotle, see Annas 1992b; Sorabji 1972/2004, x–xi; Bloch 2007, 83–84. For some modern descriptions and analyses of personal/episodic memory, see Tulving 1983; Baddeley et al. 2001.

Scotus, on the other hand, seems clearly to develop a conception of personal memory (**b**). For he distinguishes the object from the past act of experiencing the object, both of which are objects of the faculty of ‘recalling’ (= memory). In accordance with this view, Scotus says a little later that you have ‘a double object’ (*duplex obiectum*) when you are recalling. See also **2f** above. Similar views are found in some of Scotus’ near contemporaries: William of Ockham, *Quaestiones in librum quartum Sententiarum (Reportatio)* 14 (OTh 7, 292.11–23); John Buridan (?), *In Aristotelis De anima quaestiones*, ed. Patar, 465.67–74.

6 Memory and Recollection in the Philosophy of Science

a. From sensation arises memory, as we call it, and experience comes from a particular memory occurring frequently; for when memories are many in number, they constitute a single experience. And from experience – that is, from the universal that is now established in the soul [from the many memories] (the one beside the many, that is, whatever is found as one and the same in all of them) – arises the principle of art and scientific understanding: of art, if it is concerned with coming to be; of scientific understanding, if it is concerned with being. (Aristotle, *Posterior Analytics* II.19, 100a3–9)

b. The third kind of experience is the imitative one, which occurs when something that has previously been beneficial or harmful—either by nature, accident or improvisation—is once again tested on the same disease. And the empiricist’s art has come about in particular because of this kind of experience; for when they have imitated something that was previously beneficial, not only once or twice, but many times, and have found that it usually produces the same effect on the same disease, they call such memory ‘a piece of insight’ and hold that it is to be trusted and considered part of the art. And when many such pieces of insight are collected, they consider the whole collection to be the art of medicine, and the collector to be a doctor. Such a collection they call ‘personal perception’, being some sort of memory of things that one has often seen occur in the same way. This very phenomenon

they also call ‘experience’, and the report of the phenomenon they call ‘history’; for the very same thing can be personal perception to one who observes it, but history to one who learns what has been observed. (Galen, *On the Sects for Beginners*, chapter 2 (*Scripta minora* III, 3.4–20))

Whereas concepts are recollected, according to Plato, Aristotle believes that they are formed in the process described above (a). Memory is crucial to this process: it is memory that stores or collects the individual sensations, and when a sufficient number are collected, one has experience concerning the item, which amounts to a universal concept. For a similar description, see Aristotle’s *Metaphysics* I.1, 980a21–982a3. For Plato’s thoughts on the place of recollection in theories of science, see the passage from the *Meno* cited above (1a). Aristotle criticized the Platonic view on more than one occasion (see *Posterior Analytics* I.3, 72b5–73a20; *In De memoria et reminiscencia* 2, 451a18–b10). A (possibly) more Aristotelian theory was found in Alcmaeon of Croton’s work, as referenced by Plato (*Phaedo* 96b5–8). For the commentators’ views on both the Platonic and the Aristotelian theories of concept formation, see Sorabji 2005, 172–181. For more elaborate interpretations of the *Posterior Analytics* II.19, see Ross 1949, 84–86, 673–678; Kahn 1981; Barnes 1993², 259–271; Detel 1993, 829–888.

Galen describes the empiricists’ notion of experience; the two preceding kinds of experience mentioned in the text are natural [*phusikon*] and incidental [*tuchikon*] experience (b). Even though the description of the different kinds of experience focuses on the art of medicine, the results of the passage are relevant for all arts and sciences, including philosophy of science and philosophy of memory.

Frede (1990) has shown that the Memorists, even though their views seem rather different from Platonic and Aristotelian theories, are really part of this well-known philosophical tradition. In particular, one should note that the Aristotelian separation of memory and experience (see 6a) has been abandoned. Furthermore, since the relevant kind of memory *per se* constitutes a piece of insight (*theōrēma*), no reasoning process is needed to establish the art of medicine, or any other art or science, for that matter. (Note that one should perhaps translate *theōrēma* as ‘theorem’ rather than ‘piece of insight’, for *theōrēma* may well be used in its more technical sense in the present passage.) Thus, the Memorists use only perception and memory in their theory of science, the latter being the primary one for information processing, which constitutes knowledge. The precise nature of their concept of memory is difficult to establish, but it must be considerably broader than Aristotle’s; among other things, it must include at least some of the abilities that he and others usually ascribe to mind or reason. For further literature on the Memorists, see Frede 1990. For translations of some relevant works and parts of works by Galen, see Walzer and Frede 1985.

7 Memory and Recollection in the Rhetorical Tradition

a. Memory is the secure reception in the mind of matter, words, and their arrangement. (Anonymous, *Rhetorica ad Herennium* I.2.3)

b. There are two kinds of memory: one natural, the other artificial. The natural is innate in our minds and comes into existence simultaneously with thought; the artificial is solidified by specific education and by rules of method. (Anonymous, *Rhetorica ad Herennium* III.28)

c. Artificial memory consists of ‘places’ and images. We use the term ‘places’ for those scenes that are established, either by nature or by human hand, on a small scale, completely and conspicuously, in order that we can easily comprehend and contain them in our natural memory. Examples of ‘places’ are a house, a space between columns, a niche or an arch and other similar locations. Images are forms, signs and likenesses of the thing that we want to remember: for instance, if we want to have memory of a horse, a lion or an eagle, we must place images of these in well-defined places. (Anonymous, *Rhetorica ad Herennium* III.29)

d. And I enter the fields and spacious palace halls of memory, where are found the storage places of innumerable images of things of many different kinds that have been brought there by the senses. (Augustine, *Confessions* X.8)

The natural kind of memory might be conceived differently by different authors (although they would all agree that it must be *naturally* found in us without any prior training or learning), but the artificial is always the practical, trainable memory that is used in rhetorical contexts (**a–b**). The latter kind of memory consists of ‘places’ (Gr. *topoi*, Lat. *loci*) in a kind of mental map and ‘images’ that are stored in these ‘places’ (**c**). The idea is that one can mentally ‘walk’ from one place to the other and observe the images in the different places, thus making orderly remembering much easier. Rhetorical theory developed such methods in order that the different parts of a speech would be delivered in the right order without omissions. Augustine makes use of the terminology of this tradition in the passage quoted from his *Confessions* (**d**). Similar blending of philosophical and rhetorical elements occurs in the works of several thinkers of the Middle Ages. For a rhetorical concept of memory already in Aristotle, see Sorabji 1972/2004. On this kind of memory in general, see Yates 1966; Carruthers 1990; Coleman 1992, 39–59. See also Cox and Ward 2006.

8 Memory and Recollection in the Ethical Tradition

a. Prudence is knowledge of good things, bad things, and things that are neither good nor bad. It has the following parts: memory, intelligence and foresight. Memory is the faculty by which the mind re-obtains things that were; intelligence is the faculty

by which it comprehends things that are; foresight is the faculty by which something that will occur is seen before it has happened. (Cicero, *De inventione* II.53.160)

b. We say that memory is part of prudence insofar as memory falls under the scope of recollection. [...] When prudence proceeds from past objects, it uses memory, insofar as memory is part of recollection. (Albert the Great, *De bono* IV.2.1)

c. Although prudence is a virtue which is proper to human beings (for prudence is the correct knowledge of what actions to take, as is stated in *Ethics* VI), some animals are found to participate in a sort of prudence, not because they have reason, but because by natural instinct they are moved through the apprehension obtained by the sensory part to perform certain actions, as if they were acting by reason. Now, an aspect of prudence is this: that the prudent man is directed in those actions that present themselves, not only from a consideration of present circumstances, but also from a consideration of past events. Therefore, in his rhetoric, Cicero set forth as the parts of prudence not only foresight through which the future is planned, but also intelligence through which present circumstances are considered, and memory through which past events are apprehended. (Thomas Aquinas, *In De memoria et reminiscencia* 1.12–28)

d. But, just like animals have imperfect prudence compared to human beings, so they also have imperfect memory; for other animals only remember, while humans both remember and recollect. (Thomas Aquinas, *In De memoria et reminiscencia* 1.34–38)

Cicero's remark on memory (*memoria*), intelligence (*intelligentia*) and foresight (*providentia*) as the parts of prudence (*prudencia*) (**a**) may not have been the most important for his own purposes, but it became very important in philosophical analyses of memory and recollection (see e.g. **b–c**). For further literature, see Achard's introduction to Cicero's *De inventione*, 1994a, 5–55; Payer 1979; O'Rourke Boyle 1987; Cox and Ward 2006.

In discussing Cicero's concept of prudence and memory (**b**), Albert reverses the relationship between memory and recollection compared to the usual view, both ancient, medieval and modern (see, for example, Michael of Ephesus' comment in **1d** above). In any case, despite the elaborate treatment that it receives in the *De bono*, memory is simply the tool of prudence: prudence needs guidance from the past, and only memory can provide past information.

Aquinas also describes the Ciceronian view in the preface to his commentary on Aristotle's *On Memory and Recollection*, but he does so merely to substantiate the claim that memory and recollection are important capacities worth discussing (**c–d**). Cicero's views are not actually used in the rest of the commentary on the Aristotelian work; text **d** above is Aquinas' transition from a Ciceronian to an Aristotelian analysis.

Chapter 15

Early Modern Theories

Tuomo Aho

The investigation of memory in sixteenth-century philosophy was dominated by the traditional idea of memory as an inner sense which is located in the posterior ventricle of the brain and which is capable of retaining sensory species as well as recalling them when the perceived objects are no longer present. The theory of memory was hence closely connected to the theory of perception. The old distinction of *memory* and *recollection* was often mentioned, though some authors gave the name ‘memory’ to both functions (1). In early modern philosophy, much attention was paid to questions of the efficiency of memory, such as which physical conditions are favourable to memory and how the capacity of memory can be strengthened and developed by various mnemonic methods. These items have also an obvious connection to learning and pedagogy (2).

The trends of thought which challenged the old philosophy did not ignore memory, but they tended to give sweeping explanations for it. Many authors preserved the earlier idea that memory is based on memory traces which are produced by received impressions. However, there was a turn which was similar to that in the theory of perception: these ‘traces’ were no longer thought to be sensible species, but were interpreted in a more naturalistic manner as features in the brain. Thus, the brain retains traces which correspond to sensory images, and things once perceived can therefore be recovered again as memories. This naturalist interpretation of image processing was then developed further in various ways, though its presumed scientific basis remained speculative. The most extreme versions claimed that current ideas are simply moved to a storehouse as concrete objects. Hobbes, instead, saw memory as a continuous mental process which resembles the process of sensation – a process

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in the mind or in the brain begins as sensing and continues as remembering (3). One option was to interpret the memory traces more subtly as dispositions, as Descartes did in his famous comparison of remembered impressions to creases in paper which make the paper disposed to fold again in the same way. He did not develop the thought further, but it was used by later Cartesians (4).

The medieval question of purely intellectual recollection was discussed by traditional philosophers, and even Descartes made some remarks about it. However, when philosophers concentrated on memory traces and on the memory as connected to sensory perception, this subject was seldom investigated further (5). An issue central to the description and explanation of acts of memory was association, that is, how the remembered items are brought to mind again by means of other related ideas. To some extent, association psychology replaced the earlier discussions about recollection (6).

The empiricists considered memory from their own point of view, concentrating on the events of remembering rather than the retention. Locke began this analysis. For him, memory was a faculty of retention or ‘keeping of ideas’ in a latent state, from which they can reappear. He did not explain how this happens; perhaps he considered it just a basic fact. However, something more was apparently needed for memory than the reappearance of an old perceptual idea, and he therefore added some observations on the necessary experience of familiarity. Even then, critics protested that the picture was too simplistic: it did not sufficiently explain the powers of memory. The mainstream of British empiricists did not heed Locke’s reservations but continued along the most obvious path, drawing a strong parallel between memory and sensory perception. Thus Hume regards memory as the reappearance of a perceptual impression as an idea; memory differs from imagination merely in its greater ‘vivacity’ (7).

In the empiricist camp, the French tradition pointed out that Locke’s and Hume’s analyses were insufficient, because remembering as an experience is not equivalent to reviving an earlier perception, but often contains the influence of other ideas or linguistic elements. The realist Reid went even further and asserted that remembering is surely not retaining, since it does not require any preserved and revived idea at all. This implies a ‘direct realism’ with respect to memory, and it also means that our mental capacities are broader than had been supposed before (8).

1 Traditional Notion of Memory

a. Master: Memory preserves the species and the intentions which are received by the aforementioned faculties until one should make use of them.

Student: Is this not the task of imagination?

Master: Yes, but not in the same way, for while imagination treats the species received by the common sense without their temporal aspect, memory preserves these and the intentions elicited by the estimative power and the images of the

fantasy together with their temporal difference with respect to the past time at which they were perceived. (Gregor Reisch, *Margarita philosophica* X.2.29)

b. *Memory* layes up all the Species which the Senses have brought in, and records them as a good *Register*, that they may be forth-comming when they are called for by *Phantasie* and *Reason*. His object is the same with *Phantasie*, his seat and *Organ* the backe part of the brain. (Burton, *The Anatomy of Melancholy* I.1.2.7)

c. In general, memory is later in time, in the sense that it is an apparition which is left from an apprehension, and is later than it. As said, it is not merely the apparition which is called memory, but also the natural potency of the soul whereby the apparition is kept in the soul, and not merely the apparition and the potency can be called memory, but also the recordation of an apprehension which took place in the past ... For recollection, three acts are required, as will be explained later. First, the memory of some but not all earlier apprehended things; second, the negotiation or discourse from these which memory has preserved to what we try to remember; and third, the discovery of what we tried to remember. (Nifo, *Parva Naturalia* 75vb, 80ra)

d. This problem [*De memoria* 450a27–32] presupposes one thing and asks another: it presupposes that from an apprehension of a sensible thing there remains in the sensual part an apparition and species or phantasm, which is a similitude and simulacrum of the apprehended thing. It asks whether memory is of the simulacrum or of the thing of which the simulacrum is. Therefore Aristotle, before giving a solution, strives to show with arguments and signs that the apprehended sensible thing can give a simulacrum or a phantasm which is left in the sensual part. The Peripatetics call it sometimes a species, sometimes a phantasm, sometimes a passion or habit ... I say that what is left in the composition of the body and the soul is like a picture, and the habit of this passion or simulacrum we call a memory. (Nifo, *Parva Naturalia* 77va–b)

e. Memory is the faculty of the soul by which one keeps in mind what has been known by way of some external or internal sense ... That recollection which is brought about by a simple intuition of the soul in memory we have in common with animals; another is peculiar to human beings, proceeding by special steps and discourse from things which are already clear to the soul to things which have previously escaped it. (Vives, *De anima et vita* II.2 (*Opera omnia* III, 345–346))

f. Nine things converge to produce remembrance and memory: [1] Antecedent intention, by which some external or internal sense is first put in action when an object moves it. [2] Provocation of the imagination, that is, the moved sense arouses imagination mediately or immediately. [3] The passive motion of imagination which drives it to investigate. [4] The active motion of imagination by which it investigates. [5] The intentional scrutiny by the investigating imagination. [6] The image, that is, the memorable species. [7] The intention of the image: how the memorable thing is made present, with others excluded. [8] The presentation of this intention: the intention is set forth as present. And [9] the judgment which apprehends that this is the intention of that image. (Bruno, *Ars memoriae*, De organo 2 (84))

Reisch describes memory in traditional terms, as a potency preserving the received species and also qualifying them as past. It is one of the internal senses and located in the posterior cerebral ventricle **(a)**. Similar summaries remained long established in many popular treatises as well **(b)**. The same traditional conception was standard in sixteenth-century scholastic literature, and the relationship of memory to other internal senses was often discussed. Aristotle's *De memoria et reminiscentia* was the regularly quoted source. In his commentary on it, Agostino Nifo describes the various ways in which the term 'memory' is used **(c)**. Following Themistius, he argues that Aristotle's preferred use of the term is a narrow sense referring especially to an apparition or species or phantasm which a past apprehension has left in the sensory soul and which represents that apprehension **(d)**. Juan Luis Vives reminds us that animals have recollection, but only such that requires no reasoning **(e)**. (For Vives, see Murray and Ross 1982.) In his *Art of Memory*, Giordano Bruno explains the steps in the generation of memorable species by using the traditional model of inner senses **(f)**. Cf. Farinella 2002.

2 The Training of the Memory

a. Memory is sustained by the entire regimen, food, drink, exercise, rest, and sleep, which are moderate and suitable for the instruments of this faculty. There are some things which particularly benefit the memory, while others, which have been closely observed by physicians and reported in books, impede it ... People who have cold humours in the rear ventricle of the brain have difficulty in receiving things ... Those who are in good health and have full faculties and whose spirits are quick, grasp things readily, but do not retain them equally well – bilious persons are of this kind. (Vives, *De anima et vita* II.2 (*Opera omnia* III, 347–348))

b. Memory is greatly strengthened by exercise and frequent meditation. In this way it becomes quick to receive things, to grasp more things more fully, and to store them more tenaciously ... Teachers of this art give to their pupils certain places to be memorised, for when the fantasy has grasped some things at the same time, then, should one of these occur, the other is usually represented together with it. This is why there are those seats in the art of memory, since the sight of a place brings to mind what we know to have happened there or been there. Also, when something pleasant befalls us together with some voice or sound, we are delighted when we hear the same sound again; if it was a sad event we feel sad. (Vives, *De anima et vita* II.2 (*Opera omnia* III, 348, 350))

c. There are eight mnemonic means as regards understanding: similitude, opposition, order, analysis, registering of loci communes, repetition, choice of place, and concord of words.

By similitude or kinship we grasp things through similar things.

By opposition we imprint to memory one opposite by means of the other.

Order is the concern of times and contents.

Analysis is the observation of the artifices used.

By registration of loci communes we arrange the remarkable knowledge of some discipline under definite headings.

Constant repetition upholds what we want to keep in memory.

Choice of place guides us to where we are alone.

Concord of words is sought in rhymes, memory verses, abbreviations, acrostics and comparisons. (Alsted, *Encyclopaedia septem tomis distincta*, VII.31.6 (1963b))

d. The soul will permanently possess only what has been clearly conceived and accurately committed to memory. It is true what Quintilian (*Institutiones oratoriae* XI, 2, 1) says: 'All our learning is based on memory, and teaching is in vain if whatever we hear (or read) escapes from us.' And Luis Vives says: 'The memory should be exercised in youth, because it is strengthened by practice; many things should be entrusted to it and that should be done carefully and often. For in that age work does not cause stress since its greatness is not considered. So the memory widens without toil and trouble and stretches far' (Book III of *De tradentis disciplinis*). And in the Introduction of his *Sapientia* he says: 'Do not allow your memory to rest, for nothing is so much pleased and at the same time developed by work as memory. Commit something to it every day, and the more you commit to it the better it will retain everything; but the less you commit to it, the less faithful it becomes.' The truth of these words is shown by the nature's own examples. A tree grows the better the more moisture it absorbs, and conversely the more it grows the more it can absorb ... We need not at all spare the age of youth from this (while proceeding rationally, of course), for work is the best basis for solid progress. (Comenius, *Didactica magna* XVIII, § 33)

Vives refers to the possible influence of different humours and spirits on the functioning of the memory (a). An influential handbook with dietary and medical recipes for improving memory was Guglielmo Gratarolo's *De memoria reparanda, augenda conservandaque, ac de reminiscencia*, which was translated into English in 1562 (*Castel of Memory*). Other themes in the numerous mnemonic guides and textbooks were the exercises of memory, the guidelines of organizing the memorised items, and the famous mnemonic method of memory places. Ancient works often mentioned in this context were Quintilian's *Institutio oratoria* and the anonymous *Rhetorica ad Herennium*.

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Mnemonic methods were popular during the whole Renaissance period. Some thinkers gave them extraordinary importance because they were supposed to reflect general rules of regularity and rationality even in the metaphysical and cosmic realm, for example Bruno in his *Ars memoriae*. For Paracelsist mnemonics, see Fludd, *Utriusque Cosmi Historia II*, III.II.1. Concerning the whole tradition of *ars memoriae* and its repercussions, see Yates 1966; Carruthers 1990; Rossi 2000; Clucas 2002. Mnemonic techniques were associated also with the combinatorics of Lullus, and Ramistic logic used memorization principles as ways of organizing thoughts. Others saw them rather as practical instructions (cf. Lewis 2009). Moreover, memory had its traditional role in rhetorical treatises, Cicero as the main authority, but gradually it diminished when the focus turned towards literary stylistics. See Knape 1993. For discussion about memory devices like notebooks, see Yeo 2008. For a selection of texts on memorizing, see Berns and Neuber (eds.) 1998.

Vives discussed various methods for improving memory and also called attention to the role of association (**b**). Alsted's *Encyclopaedia* includes a section on mnemonics, where he states its general principles (**c**). After them, Alsted adds a separate chapter on the method of memory places (*loci*). Memory places were also studied in Gratarolo's book and in Romberch, *Congestorium artificiosae memoriae*. John Amos Comenius stressed, like many others, the importance of the constant use and development of memory for pedagogy (**d**). Though the early authorities on pedagogy considered memory central, they took it in a rather narrow sense; in practice the idea meant a lot of learning by rote. A new understanding of memory and learning found support in the eighteenth century. See Locke, *Some Thoughts Concerning Education* 175–176.

3 Memory Traces

a. An impressed species is just a certain crease or type or trace which an earlier impression has left, and it remains even when it is not apprehended or imagined; an expressed species is this same species in so far as it is intuited or apprehended when we imagine or think of the thing. Hence Cicero says: 'No species can be thought about without the influence of images.' Therefore it is just the expressed species which is properly a species or image, for only this is like the thing that we imagine, or rather it is the very thing, in so far as it is the object of imagination, and is objectively in fantasy, as is commonly said. The impressed species, rather than a species or an image, is a cause or occasion of our forming such a species or image. (Gassendi, *Physica* III.2.8.2 (405))

b. Those figures are not to be taken as ideas which are imprinted upon the organs of external senses or upon the inside surface of the brain, but only those [figures]

which leave their traces in the spirits on the surface of the gland H, *where the seat of imagination and common sense is* ... I only add that they [the traces of ideas] are imprinted in that interior part B of the brain where the seat of *memory* is.

So let us think, in this way, that when the spirits that leave the gland H have there received the impression of some idea, they pass through the tubes 2, 4, 6, etc., to the pores or intervals which are between the tiny fibres that this part B of the brain is composed of; they have the power to enlarge these intervals a little, and to bend and arrange the small fibres they meet on their way, according to their various movements and the various openings of the tubes they pass through. Thus they also trace figures which correspond to figures of objects, yet not immediately as easily or perfectly as on the gland H, but gradually, according to the force, duration and reiteration of their action. That is why these figures are not easily destroyed, either: they are preserved so strongly that, by them, the ideas that once were on this gland can be formed again long afterwards, without needing the presence of their corresponding objects. And *memory* consists in this. (Descartes, *Traité de l'homme*, AT XI, 176–178)

c. I suppose there may be about this place, which I will henceforward call the Center, a certain Sphere of Capacity fill'd with adapted Matter, for the Formation, Reception, and containing of all the Ideas which shall be emitted from the said Center. These Ideas I will suppose to be material and bulky, that is, to be certain Bodies of determinate bigness, and impregnated with determinate Motions, and to be in themselves distinct; and therefore that no two of them can be in the same space, but that they are actually different and separate one from another; and as they have their distinct Figures, so have they each of them their distinct Qualifications of Motions and Constitutions.

I will suppose further, that the Soul may every moment, partly by its own immediate Power, and partly by the help of Impressions produced by the Senses, form one of these Ideas, and insert it into the Repository. (Hooke, *Lectures of Light* (142–143))

d. When a Body is once in motion, it moveth (unless something els hinder it) eternally; and whatsoever hindreth it, cannot in an instant, but in time, and by degrees quite extinguish it: And as wee see in the water, though the wind cease, the waves give not over rowling for a long time after; so also it happeneth in that motion, which is made in the internall parts of a man, then, when he Sees, Dreams, &c. For after the object is removed, or the eye shut, wee still retain an image of the thing seen, though more obscure than when we see it. And this is it, the Latines call *Imagination*, from the image made in seeing; and apply the same, though improperly, to all the other senses. But the Greeks call it *Fancy*; which signifies *apparence*, and is as proper to one sense, as to another. IMAGINATION therefore is nothing but *decaying sense*; and is found in men, and many other living Creatures, as well sleeping, as waking ...

The longer the time is, after the sight, or Sense of any object, the weaker is the Imagination. For the continuall change of mans body, destroyes in time the parts which in sense were moved ... When we would express the *decay*, and signifie that the Sense is fading, old, and past, it is called *Memory*. So that *Imagination* and *Memory*, are but one thing, which for divers considerations hath divers names. (Hobbes, *Leviathan* I.2 (4–5))

As in the case of perception, species in memory were replaced by mechanical effects. Gassendi still wishes to express the theory of traces with the old vocabulary of species, but for him they are material **(a)**. The impressed species is the ‘replica’ or ‘counterpart’ which a sensory impression leaves upon the brain, and the expressed species is the act of apprehension, caused by the impressed species and directed towards the thing that is the original cause of the impressed species. These two take care of memory and recollection, respectively. (The distinction between expressed and impressed species is used similarly by Suárez.) Assumptions about memory traces were often very vague in their details; in fact Descartes’s own account of them was unusually detailed. According to him, sensations imprint figures on spirits in the centre of perception and imagination, and when the figures are transmitted to the seat of memory in an interior part of the brain, they leave traces there **(b)**. The quotation is from Descartes’s earliest and most naturalist period, but it is probable that his outlook remained essentially the same even later; see *Les passions de l’ame* 42, 50. (On memory traces in general, see Draaisma 2000, chs. 2 and 3.)

Hooke is an extremist of ideas as bodies **(c)**. He changes the ‘thesaurus of memory’ of the old metaphor to a concrete store, assuming that in each minimal period the soul can produce one idea into the ‘repository’, to be resumed from there more or less fully. (‘The Soul, tho an Incorporeal Being, yet in performing its Actions makes use of Corporeal Organs’, *Lectures of Light*, 138.) He continues by arguing that durations and temporal intervals can be perceived by means of the number of ideas which are located between the ideas that are at the endpoints (140–141). He even ventures to attempt some quantitative estimates about ideas. See Hintzman 2003.

Hobbes favours a more dynamic and flexible explanation. As he sees it, the physical process of the sensation can continue in the complex mechanism of the human brain, deterministically, as the memory of the same thing, until it is extinguished **(d)**. However, very long-term memory then becomes problematic, because he does not explain how the same mechanical process could go on for decades. Similar views were later advanced without the Hobbesian materialist emphasis, for instance in Hartley’s theory of ‘vibrations’.

The trace theory could be given also a spiritualist form: Henry More thinks that the extended soul acquires tendencies to revive its earlier states, brain-marks possibly having an instrumental value in this connection. ‘*Memory* is a Faculty of a more peculiar consideration; and if the Pith of Brain contribute to the Functions of any power of the mind, (more then by conserving the Animal Spirits) it is to this. But that the *Brain* should be stored with *distinct images* ... is a thing, as I have already proved, utterly impossible. If there be any *Marks* in it, it must be a kind of *Brachygraphie*, some small dots here and there standing for the recovering to Memory a series of things that would fill, it may

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be, many sheets of paper to write them at large.’ ‘Truly I do not understand but that [the Spirits] and the Soule together will perform all the Functions of Memory that we are conscious to our selves of. And therefore I shall conclude that Memory consists in this, That the Soule has acquired a greater *Promptitude* to think of this, or that Phantasm, with the circumstances thereof, which were raised in her upon some occasion. Which *Promptitude* is acquired by either the often representation of the same Phantasme to her; or else by a more vivid impress of it from its novelty, excellency, mischievousness, or some such like condition that at once will pierce the Soule with an extraordinary resentment; or finally by voluntary attention’ (More, *The Immortality of the Soul*, II.11.4–5).

4 Memory as a Disposition

a. As for memory, I believe that the memory of material things depends on the traces which remain in the brain after some image has been imprinted there, and that the memory of intellectual things depends on some other traces which remain in thought itself. But the latter are of a wholly different kind from the former, and I cannot explain them with any example taken from corporeal things which would not be very far-fetched. The traces of the brain, on the other hand, dispose it to move the soul in the same way as it moved it previously, and thus to make it remember something. It is very much like creases in a piece of paper or in cloth make it more fit to fold again in the same way than if it had never been folded so. (Descartes, Letter to Mesland, 2 May 1644, AT IV, 114)

b. For the explanation of *memory*, it is sufficient to understand this truth well: all our different perceptions are attached to the changes which take place in the fibres of the principal part of the brain, where the soul especially resides. Assuming this single principle, the nature of memory is explained. For just as the branches of a tree, when they have remained bent in a certain fashion for some time, preserve a facility for being bent in the same manner again, so too the brain fibres, having once received certain impressions by the flow of the animal spirits and by the action of objects, retain for some time a facility for receiving these same dispositions. Now, memory consists only in this facility, since one thinks of the same things when the brain receives the same impressions.

As the animal spirits act sometimes more and sometimes less strongly on the substance of the brain, and as the sensible objects cause much greater impressions than the imagination alone, it is easy to realize why we do not recall all the things we have perceived equally well. (Malebranche, *La recherche de la vérité* II.1.5.3)

Descartes compares the memory dispositions in the brain to creases in a piece of paper which make the paper fold easily again in the same way **(a)**. This quotation can be compared to Descartes's remark in Letter to Chanut, 6 June 1647: 'For the objects which touch our senses move some parts of our brain through the nerves and make there, as it were, some folds which undo themselves when the object ceases to act; but afterwards the place where they were made keeps a tendency to be folded again in the same manner by another object resembling the first in some respects, even though not completely' (AT V, 57). Here the dispositions are supposed to be activated by similar later impulses. The same comparison with creases in paper occurs also in Gassendi (*Physica* VIII.3 (408)). The idea was then elaborated by the Cartesians **(b)**. These considerations have two implications. Firstly, the retained idea need not be anything like an actual thought; it can be just a suitable disposition, as the empiricists often thought. Secondly, the 'trace' needs not be a single local imprint but it can consist of many separate minor effects. Even this dispositional explanation is largely metaphorical, though present-day cognitive science has been interested in it (see Sutton 1998; Kaitaro 1999).

5 Intellectual Memory

a. The intellect is most properly memory, and much more perfect than the memory of the sensory part. This can be shown from the definition, for memory is the power for knowing past things as such, and these are known by the intellect in a much more perfect way than by the sensory power, because the latter knows them merely materially whereas the intellect knows them also formally ... Because the cognitive activity of the intellect is in this life dependent on phantasms, it merely memorises the things of which phantasms are found in it, and therefore memory is said to be located in the first sensory power. And thus the intellectual memory depends on senses, so that we remember more easily those things which imprint better in imagination. (Suárez, *Commentaria una in De anima* 9.10.5)

b. I deem that in our intellect we have even another kind of memory, which is completely spiritual and which is not found in animals, and it is this what we use in the first place. (Descartes, Letter to Mersenne, 6 August 1640, AT III, 143)

c. I cannot help thinking that those who die pass to a sweeter and more peaceful life than ours, and that one day we shall meet them and even remember the past. For I recognize in us an intellectual memory, which is certainly independent of the body. (Descartes, Letter to Huygens, 10 October 1642, AT III, 580)

The doctrine of two kinds of memory with different seats was traditional. The dominant scholastic view followed Augustine in assuming that the intellect can know past things. This was still customary in the sixteenth century, although there were some followers of the Avicennian view that the intellectual faculty does not retain the contents of thinking, such as Zabarella (*De speciebus intelligibilibus*, in *De rebus naturalibus*, 992–997), and some other critics of the majority view (Spruit 1994, ch. 9). The standard notion of intellectual memory is supported by Suárez (a); see also *Commentarii Collegii Conimbricensis in Parva Naturalia*, De memoria 1. Descartes's remarks on the intellectual memory show similarities to the Augustinian tradition, but he disagrees with the usual opinion that there is no real distinction between intellectual memory and intellect (b, c). His intellectual memory is close to what some scholastics had called personal memory, that is, the record of one's own earlier mental states; this was studied by later Scotists. (See p. 440.) Note also the problematic suggestion that thoughts can leave some traces in the immaterial soul (4a). Since intellectual memory can recognize earlier personal experiences, it is essentially self-reflection; cf. Letter to Arnauld, 4 June 1648 (AT V, 193). See Davenport 2005; Joyce 1997. Intellectual memory was not much discussed after early Cartesians, see Schmaltz 2002, ch. 4.1. On Wolff's attempt to revive it, see Rudolph 2003.

In *Meditationes* V, AT VII, 64 Descartes writes about necessary intellectual truths: 'And their truth is so open and so much in accordance with my nature, that on first discovering them I seem not to learn anything new but rather to remember what I already knew before.' In *Nouveaux Essais* II.10.1 Leibniz remarks: 'We also retain and contemplate innate knowledge, and very often we cannot distinguish the innate from the acquired.' In II.27 he elaborates this issue and considers whether there is a genuine difference between knowing an intellectual truth for the first time and remembering it, comparing this to anamnesis. Anamnesis by actual transmigrating, however, never found serious support in modern philosophy.

6 Associative Memory

a. Proposition 18. If the human body was once affected by two or more bodies at the same time, when the mind later imagines one of them it will immediately remember the others as well.

Demonstration. The mind (by the preceding Corollary) imagines some body because of the fact that the human body is affected and disposed by the traces of an external body in the same way as it is affected when certain parts of it are moved by the external body itself. But (by hypothesis) the body was then so disposed that the mind imagined two bodies at the same time. Therefore, the mind will even now

imagine the two at the same time, and when it imagines either of the two, it will immediately remember the other as well. QED.

Scholium. From this we clearly understand what *memory* is. It is nothing but a certain interconnection of ideas involving the nature of things outside the human body, which occurs in the mind in accordance with the order and interconnection of the affections of the human body. (Spinoza, *Ethica* II, 18)

b. For in a Discourse of our present civill warre, what could seem more impertinent, than to ask (as one did) what was the value of a Roman Penny? Yet the Coherence to me was manifest enough. For the Thought of the warre, introduced the Thought of the delivering up the King to his Enemies; The Thought of that, brought in the Thought of the delivering up of Christ; and that again the Thought of the 30 pence, which was the price of that treason: and thence easily followed that malicious question; and all this in a moment of time; for Thought is quick. (Hobbes, *Leviathan* I.3 (9))

c. This strong Combination of *Ideas*, not ally'd by Nature, the Mind makes in it self either voluntarily, or by chance, and hence it comes in different Men to be very different, according to their different Inclinations, Educations, Interests, etc. Custom settles habits of Thinking in the Understanding, as well as of Determining in the Will, and of Motions in the Body ... A Musician used to any Tune will find that let it but once begin in his Head, the *Ideas* of the several Notes of it will follow one another orderly in his Understanding without any care or attention. (Locke, *An Essay concerning Human Understanding* II.33.6)

The issues around associative memory had traditionally been applied and studied in mnemonic treatises (see also 2 above). There were some analyses of this phenomenon in seventeenth century mechanistic psychology. For example, it could be used to explain the experience of recollection, which was difficult to handle within the framework of early modern philosophers. Thus Spinoza states that when two things are experienced together their ideas may be associated, and the recollection of one can be caused by the appearance of an idea of the other (**a**). (For Spinoza, see Lin 2005.) See also Leibniz, *Monadologie* 26. Hobbes comments on the features of similarity and coherence joining the links in the chain of ideas that lead from one to other (**b**). Remarks about such associations are found in later empiricist works, but active attempts to recollect were not often discussed – the second member of the old pair ‘memory and recollection’ was largely neglected (**c**).

7 The Development of the Empiricist Theory

a. § 1. The next Faculty of the Mind, whereby it makes a farther Progress towards Knowledge, is that which I call *Retention*, or the keeping of those simple *Ideas*, which from Sensation or Reflection it hath received. This is done two ways. First,

by keeping the *Idea*, which is brought into it, for some time actually in view, which is called *Contemplation*.

§ 2. The other way of Retention is the Power to revive again in our Minds those *Ideas*, which after imprinting have disappeared, or have been as if laid aside out of Sight: And thus we do, when we conceive Heat or Light, Yellow or Sweet, the Object being removed. This is *Memory*, which is as it were the Store-house of our *Ideas*. For the narrow Mind of Man, not being capable of having many *Ideas* under View and Consideration at once, it was necessary to have a Repository, to lay up those *Ideas*, which at another time, it might have use of. But our *Ideas* being nothing, but actual Perceptions in the Mind, which cease to be any thing, when there is no perception of them, this *laying up* of our *Ideas* in the Repository of the Memory, signifies no more but this, that the Mind has a Power, in many cases, to revive Perceptions, which it has once had, with this additional Perception annexed to them, that it has had them before. And in this Sense it is, that our *Ideas* are said to be in our Memories, when indeed, they are actually no where, but only there is an ability in the Mind, when it will, to revive them again; and as it were paint them anew on it self, though some with more, some with less difficulty; some more lively, and others more obscurely. (Locke, *An Essay concerning Human Understanding*, II.10, titled *Of Retention*)

b. *Attention and Repetition help* much to the fixing any *Ideas* in the Memory: But those, which naturally at first make the deepest, and most lasting Impression, are those, which are accompanied with *Pleasure or Pain*. ...

The Memory in some Men, 'tis true, is very tenacious, even to a Miracle: But yet there seems to be a constant decay of all our *Ideas*, even of those which are struck deepest, and in Minds the most retentive; so that if they be not sometimes renewed by repeated Exercise of the Senses, or Reflection on those kind of Objects, which at first occasioned them, the Print wears out, and at last there remains nothing to be seen ... *The Pictures drawn in our Minds, are laid in fading Colours*; and if not sometimes refreshed, vanish and disappear. (Locke, *An Essay concerning Human Understanding* II.10.3, 5)

c. In this secondary Perception, as I may so call it, or viewing again the *Ideas*, that are lodg'd in the Memory, *the Mind is oftentimes more than barely passive*, the appearance of those dormant Pictures, depending sometimes on the Will. The Mind very often sets it self on work in search of some hidden *Idea*, and turns, as it were, the Eye of the Soul upon it; though sometimes too they start up in our Minds of their own accord, and offer themselves to the Understanding; and very often are rouzed and tumbled out of their dark Cells, into open Day-light, by some turbulent and tempestuous Passion; our Affections bringing *Ideas* to our Memory, which had otherwise lain quiet and unregarded. This farther is to be observed, concerning *Ideas* lodg'd in the Memory, and upon occasion revived by the Mind, that they are not only (as the Word *revive* imports) none of them new ones; but also that the Mind takes notice of them, as of a former Impression, and renews its acquaintance with them, as with *Ideas* it had known before. So that though *Ideas* formerly imprinted are not all constantly in view, yet in remembrance they are constantly known to be such, as have been constantly imprinted, *i.e.* in view, and taken notice of before by the Understanding. (Locke, *An Essay concerning Human Understanding* II.10.7)

d. If the ideas were only the forms or manners of thoughts, they would cease with them; but you have yourself admitted, sir, that they are the inner objects of thoughts, and as such they can persist. I am surprised that you can still rest content with these bare ‘powers’ or ‘faculties’, which you would apparently not accept from the scholastic philosophers. What is required is a somewhat more distinct explanation of what this faculty consists in and how it is exercised. That would show that there are dispositions which are remains of past impressions, in the soul as well as in the body, but which we are not aware of except when the memory has an occasion for it. If nothing were left of past thoughts as soon as we ceased to think them, it would be impossible to explain how we could hold the memory of them; to resort to that bare faculty for this is no intelligible speech. (Leibniz, *Nouveaux Essais sur l’entendement humain* II.10.2)

e. ‘Tis evident at first sight, that the ideas of the memory are much more lively and strong than those of the imagination, and that the former faculty paints its objects in more distinct colours, than any which are employ’d by the latter. When we remember any past event, the idea of it flows in upon the mind in a forcible manner ...

There is another difference betwixt these two kinds of ideas, which is no less evident, namely that tho’ neither the ideas of the memory nor imagination, neither the lively nor faint ideas can make their appearance in the mind, unless their correspondent impressions have gone before to prepare the way for them, yet the imagination is not restrain’d to the same order and form with the original impressions; while the memory is in a manner ty’d down in that respect, without any power of variation.

‘Tis evident, that the memory preserves the original form, in which its objects were presented, and that where-ever we depart from it in recollecting any thing, it proceeds from some defect or imperfection in that faculty. An historian may, perhaps, for the more convenient carrying on of his narration, relate an event before another, to which it was in fact posterior; but then he takes notice of this disorder, if he be exact; and by that means replaces the idea in its due position. ‘Tis the same case in our recollection of those places and persons, with which we were formerly acquainted. The chief exercise of the memory is not to preserve the simple ideas, but their order and position. (Hume, *A Treatise of Human Nature* I, I.3 (9))

Locke allows that memory is based on the faculty of the retention of ideas. In that state the ideas are potential, and retention can be understood as a power to revive them. When they are revived, the mind ‘paints them anew on it self’ **(a)**. He also makes observations concerning the differences in the strength and easiness of various memories **(b)**. The mere reappearance of original ideas is not yet remembering because the remembered ideas must also be experienced as past and familiar. An idea’s being in the repository of the memory signifies that the mind has a power to revive it, with the annexed awareness that one has had it before **(a)**. Later Locke wanted to emphasize this even more clearly and

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added a passage about this in the second edition (c). Critics, however, were still not satisfied with this account of awareness of personal past experience. Leibniz argued that it is uninformative to speak here just of a ‘faculty’, since the issue is precisely the nature of that faculty (d). It must be added that Locke’s view of personal identity is based on the continuity of consciousness and consequently of memories, which Leibniz did not regard as a sufficient criterion (Noonan 2003, 24–52).

Hume makes the important point that for memory it is essential to conceive temporal relations and consider not only single events but their temporal orderings (e). Yet this is not sufficient to define memory: see *Treatise* I.III.5 (85–86), where he argues that the characteristic feature of memories cannot be found in their content or organization. The only thing that can distinguish memory from simple images concerning temporal matters is ‘belief or assent’ that belongs only to memory; and that in its turn consists of ‘nothing but the vivacity of those perceptions they present’. Hume nowhere explains what such ‘vivacity’ is, or how anyone can know that his experience is ‘vivacious’. (For one interpretation see McDonough 2002.)

8 Memory as an Experience

a. To make a better analysis of recollection, we should give it two names: one insofar as it makes us know our being, the other insofar as it makes us recognize the perceptions which are repeated in it, for these are quite distinct ideas ...

We are not always able to evoke perceptions that we have had ... When one thinks, for example, about a flower with a familiar odour, one recalls its name, one remembers the circumstances where one saw it, and represents the scent subsumed under the general idea of a perception affecting the sense of smell, but one is not able to evoke the perception itself. I call the operation that has this effect *memory* ...

It is beyond any doubt that we may very well remember a perception which we do not have the power to revive. All philosophers have here fallen into the same error as Locke. Those who believe that every perception leaves an image of itself in the mind, much as a seal leaves its imprint, are not an exception: for what would this image of a perception be if not the perception itself? Here the root of the mistake is that they have not sufficiently considered the matter and hence take various circumstances or some general idea, which are in fact called to mind, as the very perception of the object. (Condillac, *Essai sur l’origine des connaissances humaines* I.1.15; I.2.18; I.2.20)

b. It is by memory that we have an immediate knowledge of things past ... Memory must have an object. Every man who remembers must remember something,

and that which he remembers is called the object of his remembrance. (Reid, *Essays on the Intellectual Powers of Man* III.1 (303))

c. From the principles laid down in the first chapter of this Essay, I think it appears, that our notion of duration, as well as our belief of it, is got by the faculty of memory. It is essential to every thing remembered that it be something which is past; and we cannot conceive a thing to be past, without conceiving some duration, more or less, between it and the present. As soon therefore as we remember anything, we must have both a notion and a belief of duration. It is necessarily suggested by every operation of our memory; and to that faculty it ought to be ascribed. (Reid, *Essays on the Intellectual Powers of Man* III.3 (310))

d. If a Philosopher should undertake to account for the force of gunpowder, in the discharge of a musket, and then tell us gravely, that the cause of this phaenomenon is the drawing of the trigger, we should not be much wiser by this account. As little are we instructed in the cause of memory, by being told that it is caused by a certain impression on the brain. For supposing, that impression on the brain were as necessary to memory as the drawing of the trigger is to the discharge of the musket, we are still as ignorant as we were how memory is produced; so that, if the cause of memory, assigned by this theory, did really exist, it does not in any degree account for memory.

Another defect in this theory is, that there is no evidence, nor probability that the cause assigned does exist; that is, that the impression made upon the brain in perception remains after the object is removed. (Reid, *Essays on the Intellectual Powers of Man* III.7 (340))

Many later empiricists regarded Locke's and Hume's account as too vague. Thus Condillac draws the distinction between remembering an object X that was sometimes perceived and remembering the perception of X **(a)**. He points out that the British empiricists had not paid sufficient attention to this difference. He also asserts that memories are not duplicates of the original perceptions. According to Condillac, something must come to mind, though not necessarily the original perception itself, but some correlate of it. Moreover, memory can be regulated to a high degree by linguistic factors, names, or signs (Paganini 1988).

Reid's opinion is that past things, perhaps already non-existent entities, are the objects of memory. They are known immediately. That is, Reid defends direct realism of memory **(b)**. Memory is a primitive capacity, which also must include the grasp of duration **(c)**. It does not operate by means of any present traces or remembrances. Here his argument is the same as with perception: there is no evidence of the existence of such things, and in any case, they would give no explanation of the phenomenon itself **(d)**. Even if they had some causal role in the occurrence of memories, memory does not concern them. Hence memory is an unaccountable kind of direct contact with the past (III.2 (306–307)). The experience of memory is also fundamentally different from other experiences (van Woudenberg 1999; Copenhaver 2006a).

Part VI
Intellect, Intellection and Concept
Formation

Chapter 16

Ancient Theories of Intellection

Miira Tuominen

Ancient philosophical schools shared the view that, in addition to perceptual capacities, human beings have reason. It was also generally supposed that reason is not to be understood solely as a capacity of inference, but that it must also have content (1). Such content was often taken to be general: as opposed to perception which deals with particulars, reasoning operates with general or universal features of reality.

One important question related to these suppositions was how such general or universal contents are acquired. It was widely but not universally held that the general notions used in human thought are basically the same in all individuals (2). This assumption seems to imply that the acquisition process has to be uniform between different human beings. Perhaps the most important demarcation line between the descriptions of the process was whether or not the acquisition process required some pre-existent or innate structures, notions or categories. The Platonic theories of recollection (3) and that of the greatest kinds (4) are versions of the view that the rational capacity, its structure, or categories pre-exist sense perception and abstraction. Aristotle argued against this view (5), but his account is not purely empirical, either. According to Aristotle, the acquisition of accurate general notions (such as ‘human being’ or ‘animal’) requires a special intellectual capacity: the capacity to actualise the form of the object in one’s soul. To illustrate the point that there are no innate ideas in the intellect, Aristotle introduced the metaphor of an empty writing tablet (7). This metaphor was revived much later in the early modern period, and used for more strictly empirical theories. Despite the *prima facie* conflict between Plato’s and Aristotle’s views, some late ancient theories combined

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ingredients from both views (6). Aristotle's claim that intellectual apprehension must be understood as interaction between active and passive powers (as is the case in perception) was influential later in the Middle Ages (see pp. 270–277 below on medieval theories of the intellect). His brief and difficult remarks on the active intellect in *De anima* III.5 also led to extensive discussions in the late ancient commentaries (8) and beyond.

From a metaphysical point of view, the Platonic-Aristotelian tradition supposed that our intellectual understanding or grasp of the world requires or presupposes that reality is structured by the same forms which are also actualised in our soul or intellect (Platonic forms and greatest kinds 4, Aristotelian intelligible forms 2). Late ancient Platonism after Plotinus built on Aristotle's claim that our intellect becomes identical with the forms when grasping them and the Parmenidian statement of the identity of being and intellect (*nous*) by postulating a single hypostasis Intellect in which the being of the subject and object of intellectual understanding are in a sense identical: the being of the intelligible forms amounts to them being grasped by the Intellect which is eternal in the sense of being beyond time (2). Even though the Stoics and the Epicureans did not assume an ontology of forms, their accounts of how we acquire reliable or correct general notions (9) were rather similar to what we find in Aristotle. In addition to the general notions formed in direct (repeated) experience, the Stoics introduced operations such as diminution and augmentation, or some kind of induction through which the human reason was also supposed to form correct general notions, such as the notions of justice and god. The Stoics also thought that reality is organised by a cosmic reason (*logos*), and this organisation is reflected in our preconceptions. However, as indicated above, not all philosophical schools shared this confidence in naturally and homogeneously received general conceptions. The Stoic and Epicurean theories in particular came under attacks from the sceptics (9).

In addition to the question of how general content is acquired in the intellect, a central problem was the nature of such content. More specifically, the question is whether or not this content is propositional. The Platonic forms (e.g., 'equality' in 3), the 'greatest kinds' (*megista genē*, such as being, sameness and difference in 4), and the Aristotelian natural notions of species (5) constitute examples of non-propositional entities in the intellect. The Stoics, by contrast, understood preconceptions as propositional dispositions: when we have a preconception of the good, we are disposed to think in certain ways of the good – for example, what is good is beneficial, and it should be striven after in all situations (9). The problem of propositionality is related to another question: the relation between language and thought. On this question, too, the ancient schools had diverging views. In Plato and Aristotle, intellectual apprehension is likened to vision rather than language (3). Late ancient Platonism or Neoplatonism emphasised the distinction between discursive reasoning and theoretical vision which transcends language: theoretical vision concerns complex wholes and grasps them, as it were, at a glance. As opposed to this non-conceptual and non-propositional form of intellectual understanding, discursive reasoning operates with concepts which are combined into propositions and chains of reasoning. For the Stoics, all reasoning was in essence propositional, some sort

of inner language or speech (*endiathetos logos*). Plato and Aristotle also used a similar comparison when discussing inference; for them, inference was primarily a social activity of disputation (see below on ancient reasoning psychology).

Philosophers also debated whether some sort of mental presentations or appearances are necessary for the function of reason. Many agreed that images or appearances (*phantasmata*) can be used as auxiliaries for thought, particularly in mathematics (see Proclus on Euclid, p. 124 above). However, fewer were willing to accept Aristotle's point that *phantasmata* are *necessary* for thought. Alexander of Aphrodisias already seemed to reject this requirement and posited that the most abstract forms of thought do not need *phantasmata* or images. (See p. 125 above.)

In the general theory of human cognitive activity, an important question was the role of memory (see the section on memory). In particular, the ancient schools diverged on whether our intellect functions as a kind of storehouse for intelligible objects or notions (e.g., Themistius in **1**), or whether the intelligible objects are eternally there in the intellect without having to be in the memory at all. According to the latter alternative, our intellectual apprehension does not store any contents, but whenever we manage to understand something intellectually a connection with the intellect is re-established.

1 Reason as a Collection of Concepts or Preconceptions

a. Reason is a collection of certain concepts and preconceptions (The Stoics according to Galen, *On the Doctrines of Hippocrates and Plato* V.3.1 = SVF 2.841).

b. But [the potential intellect] makes the potentially intelligible objects actually intelligible to itself – the potentially intelligible objects being the enmattered forms – and it gathers the common concepts from particular sensibles, which up to this point are impossible for it to discern, and it is impossible for it to pass from one to another or to combine and divide. Rather, it is like a storehouse for concepts, and more like matter for those that are there besides the perceptibles; it instills the imprints from the appearances with the help of memory. (Themistius, *In De anima paraphrasis* 99.2–8)

The ancient schools typically saw reason as not just an instrumental capacity of inference but as a capacity which is related to the truth in a specific way. Even though it was recognised that human thought can err (and frequently does), a rather widely-shared view was that there are some truthful or accurate elements which are collected or stored in our reason or exist in it already before carnal birth. The supposition seemed to be that this guarantees the possibility of adequate abstract or general reference. The collection that Galen talks about is not indicated to have any specific structure (**a**) – he calls

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it *athroisma*, which simply means something that has been gathered together, even ‘a heap’. (The Greek for the ‘concept’ is *ennoia*, whereas the term for preconceptions is *prolēpsis*.) Themistius’ analogy, ‘a storehouse of concepts’ (*thēsauros noēmatōn*), applies to our potential intellect in a state before it is actually grasping anything (**b**). Themistius does not explain what exactly he means by the ‘common conceptions’ (*koina noēmata*) which the potential intellect gathers from the perceptibles. However, what is clear is that he distinguishes the function of collecting rather strictly from the ability to use the collected notions in thought. Elsewhere, Themistius states that the stored notions can only be used (combined and divided) after the potential intellect has encountered the active intellect; for Themistius on the active intellect, see **8d** below and the notes.

2 The Objects of Different Intellects Are the Same

a. Spoken words are symbols of the soul’s affections and written words are symbols of spoken words. And just as letters are not the same for all, the spoken ones are not the same either. But the affections of the soul, of which they are the signs, are the same for all; and the things of which the affections are the likenesses are the same indeed. (Aristotle, *De interpretatione* 1, 16a4–8)

b. The perceptive and the knowing faculty of the soul are potentially these things: the latter the knowable, and the former the perceptible. Thus they must be the things themselves, or forms. But they cannot be the things themselves, for the stone is not in the soul, but rather its form. (Aristotle, *De anima* III.8, 431b26–432a1)

c. The actuality of the perceptible object and perception is one and the same, but their being is not the same (Aristotle, *De anima* III.2, 425b26–27).

d. This is similarly the case of pieces of knowledge: the teacher grasps the same objects as the one who learns. This is because there would not be any teaching and learning if the concept that the teacher and the student have were not the same. And if [that concept] is the same – as it is necessary for it to be – then the intellect of the teacher will be identical with the intellect of the student, since in the case of the intellect its essence is the same as its activity. (Themistius, *In De anima paraphrasis* 104.6–11)

e. If, then, we who are all composed of potentiality and actuality refer to one active intellect, and if our being is besides it, we need not wonder. For where do the common notions come from? From where do the untaught and similar understanding of primary terms and of primary axioms originate? We could never understand each other without some one intellect in which we all take part, and [thus] the following claim of Plato is true: If there were some one affection in human beings which is the

same for this and that individual, but each of us were undergoing some unique affection compared to the others, it would not be easy to indicate to another person one's own affection. And in this way, in the case of sciences, the teacher and the one who learns are grasping the same objects; for there would be no teaching and learning if the teacher and the student did not share the same concept. (Themistius, *In de anima paraphrasis* 103.36–104.9)

f. Thus in this way the Intellect and the intelligible are one, and it is the being and the primary being and the primary Intellect possessing the beings, or, rather, is the same as the beings... (Plotinus, *Enneads* V.3.5, 26–28).

g. If, then, the thought of the Intellect is the intelligible, and the intelligible is itself, it [the Intellect] will think of itself; for it will think by thinking, which it is itself; and it will think of the intelligible, which it is itself. Therefore, in accordance with both [accounts] it will think itself, on the one hand, because the thought is itself and, on the other, because the intelligible is itself – that which thinks by thought, which it is itself. (Plotinus, *Enneads* V.3.5, 44–48)

h. Here, then, we have one nature, the Intellect, all beings, and truth. If it is like this, it is some great god. Or rather, not some god, but it claims the whole of divinity. (Plotinus, *Enneads* V.5.3, 1–3)

i. [L]et it thus be said that the true Form is thought, but primarily it is the act of thought of the true Intellect, i.e., the Fatherly [Intellect], [the one] in which beings are also thoughts and thoughts are beings. Therefore, the Oracles, interpreting for us the Ideas as they primarily exist in the Intellect have named them 'Fatherly Concepts', as being demiurgic thoughts, since the thought and its object are one in substance. (Proclus, *Commentary on Plato's Parmenides* 895.3–9)

In the psychological works Aristotle claims that the form as grasped by the intellect is the same as the form of the object, even though their being is different (**b–c**), whereas in *De interpretatione* (**a**) he appeals to likeness (*homoiōma*): the affections in the soul (*pathēmata tēs psukhēs*) are likenesses of things (*pragmata*); cf. Charles 2000, 80–81. In *De interpretatione*, Aristotle is not operating with the conceptual apparatus of the *De anima*, which includes intelligible forms, potentialities for being grasped intellectually, and potentialities for grasping intellectually. Given that (according to Aristotle) the objects we grasp are the same, *and* that grasping something involves our intellect becoming the same in form as the object, it seems to follow that the intellect is the same in two intelligent beings when they are both grasping the same thing. Themistius draws this conclusion explicitly (**d–e**); his reference to Plato (**e**) is to *Gorgias* 481c. This idea of the identity between the intellect and its objects was further developed by Plotinus (**f–g**; cf. *Enneads* V.1.4, 21–22). Plotinus went as far as to say that singular human beings do not have intellects of their

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own, but rather there is one intellect that we all share when we reach the state of intellectual apprehension proper. In this Intellect, which is a level of being, a *hypostasis*, of its own, all intelligible objects are grasped in all their interrelations in an eternal or, rather, timeless activity of intellectual understanding (**h**). See Emilsson 2007, 199–207. Proclus speaks about Fatherly Concepts in this context (**i**). On the development of Proclus' complex view concerning the relation between the Fatherly Intellect and the demiurge, see van den Berg 2001, 56. For Plotinus, presuming the identity of intellectual subject and object also implied self-reflexivity (see p. 417 below).

3 Intellectual 'Vision' and Recollection as Opposed to Discursive Reasoning

a. Socrates: Consider, then, whether these things are so. For we say in a way that there is something equal, not the way in which I say a stick is equal to another stick, nor a stone to another stone or anything of that sort, but something apart from all of these: the equal itself. Shall we say there is something like this or not?

Simmias: We certainly shall, by Zeus, we certainly shall.

Socrates: And what it is, do we know that?

Simmias: Indeed we do.

Socrates: From where, then, do we gain this very knowledge? Is it not from those things we just spoke about, from seeing that either sticks or stones or other such things are equal that we come to grasp the equal, being something other than them? Or does it not seem to you to be something else? Consider it this way as well. Do not stick and stones, while remaining the same, sometimes seem equal to these and unequal to those things?

Simmias: They do.

Socrates: What then? Can the equals themselves be those which seem to you to be unequal, or the equality to be inequality?

Simmias: Never, Socrates.

Socrates: Therefore, the equal things and the equality itself cannot be the same.

Simmias: I can see no way that they could, Socrates.

Socrates: But from these things, namely the equals, being something other than the equal as such, have you come to understand and grasp the knowledge of it?

Simmias: Most truly I have, Socrates.

...

Socrates: What then? Do we experience something like this in the case of sticks and the equal things we have just talked about? Does it seem to us that they are equal in

the manner of the equal itself, or, rather, do they lack something with respect to being the same sort of thing as the equal itself? Or do they lack nothing?

Simmias: They do lack a lot.

Socrates: When someone sees that something he grasps wishes to be ... something else, but is lacking and cannot be such as [the equal] itself, being inferior, do we agree that it is in some way necessary for someone to grasp this in order to have prior knowledge of that which he says the other thing is like but falls short of?

Simmias: Necessarily.

Socrates: What, then: do we also experience this with respect to equal things and the equal itself, or not?

Simmias: We certainly do.

Socrates: Therefore, it is necessary for us to know the equal before the time when we saw the first equal things and grasped that they all want to be like the equal but are lacking.

Simmias: So it is. (Plato, *Phaedo* 74a–75a)

b. From there a human soul can enter the life of an animal, and a soul which was once human can move from an animal to a human being again. For a soul which never saw the truth will not take [the human] shape, since a human being must understand what is said in terms of forms, beginning from many perceptions and bringing these together by thought into a unity. This is the recollection of the things which our soul saw when it was travelling with god. (Plato, *Phaedrus* 249b–c)

c. The reason of the god is nourished by pure intellect and knowledge, and is the reason of any soul that intends to receive what is appropriate for it, and having after a time seen that which is, it delights; grasping the truth, it is nourished and rejoices until the cyclical movement brings it to the same place. In its movement around it sees justice itself, it sees moderation itself, it sees knowledge – not the knowledge the becoming of which is close, not the one which is in a way another of another, of those that we call real now, but the knowledge which is knowledge in the sense of being about that which is as it really is. And when the soul has seen the other things which are real beings in this way and has feasted on them, and when it has dived into heaven again, it goes home. (Plato, *Phaedrus* 247d–e)

d. The intellect grasps the forms in the appearances and in them distinguishes that which is to be pursued and that which is to be averted... and it reasons and deliberates about the things which are at hand... as if it were seeing. (Aristotle, *De anima* III.7, 431b1–7)

e. In the case of the non-composite objects of intellect, what is to be and not to be, and what is truth and falsity? For it is not composite, for which being is when it is together and not being when it is separate, as is the case when the white and the stick [are combined] or the incommensurate is combined with the diagonal; nor will truth and falsity apply in the same way to the non-composites. Or, rather, as truth and falsity do not apply in the same way in the case of non-composite [objects], being does not either, but truth and falsity are as follows: to be in contact

with the incomposite thing and to say it is true...., and to be ignorant of it is not to be in contact. (Aristotle, *Metaphysics* IX.10, 1051b17–25)

f. From continuous perception we obtain a kind of theoretical vision concerning the universal, which is at first called a ‘concept’ or ‘notion’, but when we become more experienced and learned so that our notions become variegated and manifold and it is possible to grasp the objects entirely independently of the underlying perceptual conditions, it is ‘intellectual apprehension’. (Alexander of Aphrodisias, *De anima* 85.20–25)

g. If the intelligibles are not grasped and they are without life, what are they? For they are neither premises, nor propositions, nor sayables. (Plotinus, *Enneads* V.5.1, 37–39)

One argument for the theory of recollection (*anamnēsis*) in Plato’s *Phaedo* is the following: since none of the perceptible objects is equal *as such*, but is only equal in some respects and to some objects and unequal in other respects and to other objects, we could never come to grasp equality at all on the basis of perception alone. This is because we would not have any standard according to which we could judge whether some things are equal or unequal. Therefore, Plato concludes, equality itself needs to be in our soul to enable us to make these judgements (**a**). Further, since such general standards or notions cannot be acquired from experience, they need to pre-exist in the soul or be inborn. By virtue of such innate ideals in the soul, we will be able to recognise equality when we encounter it imperfectly realised in perceptible objects. In the *Meno*, the theory of recollection is famously connected to Socrates’ claim (82a–86b) that the slave boy does not *learn* about squares when subjected to Socrates’ questioning, but rather *recollects* what is already in his soul. In the *Phaedrus* the non-bodily grasp that the soul’s rational part has of reality is likened to vision (**b–c**). In the *Republic* (VII 516a–c) the intellectual apprehension acquired by those who emerge from the cave is compared to their vision of the sun. The forms which are grasped in an immediate vision-like act of the intellect function as elements of such thought which Plato calls dialectical and which is able to reach the true natures of things. (For the visual metaphors, see also the *Symposium* 210e–211, even though in the context Plato mixes in tactile and erotic metaphors as well in 212a.) The visual terminology is also found in Aristotle (**d**) and Alexander (**f**). Aristotle also uses the tactual metaphor to make the following point (**e**): whereas with composite objects falsity means that one combines things which are not in reality combined (e.g., when one states that the diagonal and the side of a square are commensurate), this is not the case with the non-composite ones. For non-composite objects truth means that one has reached the object and thus ‘touches’ (*thigein*) it, while falsity means that the object is not ‘touched’, i.e., successfully referred to at all.

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After Plotinus the distinction between conceptual or discursive thought and non-discursive intellectual understanding became central; for the distinction in Plotinus, see Emilsson 2007, chapter 4. The intellectual apprehension proper does not, according to Plotinus, concern propositions or premises or anything that is sayable (**g**). Intellectual understanding proper concerns complex wholes of intelligible things as they are related to each other. As such, it can be likened to the way in which we see a complex whole of perceptible things in their interrelations. Even though in some sense such a ‘vision’, be it intellectual or perceptual, can be articulated in a chain of propositions explaining what we see or grasp, the description will not catch the whole in its complexity – and it will be bleak and lacking compared to the experience itself. (For the discussion concerning propositionality, see also Lloyd 1969–70; Sorabji 1982). Emilsson illustrates the Plotinian intellectual vision by an example in which we having tried to solve a complex theoretical problem (e.g., in mathematics), we sometimes, rather unexpectedly, understand how the problem can be solved. The solution can then be stated in a series of propositions, but these propositions are distinct from the complete and immediate vision-like act of understanding.

4 Principles in Soul and the Basic Structuring Principles of Reality

a. Because the soul is mixed together from sameness and difference and being... and divided and bound together in proportions, and because it revolves around itself, then when it comes in contact with a being which has something scattered about it, and when it comes in contact with something indivisible, it is moved throughout its whole being. It states what this thing is the same as and what it is different from, to what and how and when ... And when there arises from this contact an account which is equally true with respect to what is different and to what is the same ... and when the account becomes of that which is perceptible, the circle of difference goes directly to announce it to the whole soul. True and firm beliefs and convictions are also formed. When, then, the account is concerned with the object of reasoning and the circle of sameness is running well and informs these things, knowledge and intellectual apprehension necessarily follow. (Plato, *Timaeus* 37a–c)

b. Actual knowledge is the same as the thing which is known. Potential knowledge in the individual is prior in time, but in general it is not even prior in time, for all things come to be from that which is actual. (Aristotle, *De anima* III.7, 431a1–4)

Plato's *Timaeus* presents in a mythical form the assumption that the soul is constituted by the same abstract elements as the world, namely: being, sameness and difference which are not supposed to be the only greatest kinds (for likeness and unlikeness, for example, see *Parmenides* 129d–e; 130b). Even though I use the standard translation 'greatest kinds', it needs to be noted that the greatest kinds are not always kinds or categories but rather general notions which structure all kinds and categories. However, sometimes Plato also treats the greatest kinds as kinds; for example, change is in the *Theaetetus* (181c–d) subdivided into alteration and locomotion (see also *Parmenides* 138b–c). In *Timaeus* 35a Plato describes how the demiurge moulds the soul of the world from these ingredients, and later he makes clear that the human soul is constituted by them as well (a). Because of being constituted by the same elements, the soul is supposed to be capable of making true judgements concerning the real sameness and the real differences between things. In *Timaeus* 44b, the functioning of the soul and its recognition of sameness and difference is also explained by reference to circular motion. In that context, Plato indicates that even though the constitutive elements of our soul, sameness and difference, are non-propositional abstract notions or categories, the results of recognition of sameness and difference seem to be given as propositional judgements.

Despite the fact that Aristotle criticised the view according to which thought should be explained through circular movement (*De anima* I.3, 407a3–23) or the assumption of the pre-existence of these elements in the soul (2b–c above), he did endorse the supposition that in intellectual apprehension proper, the same elements which structure reality as the intelligible forms are realised in the soul (b) even though their mode of being is different in the two. For his view that the intellect grasps things by becoming identical in form with them, see also *De anima* III.4, 429b5–9.

5 Aristotle on Knowledge Acquired from Experience

a. It would be out of place to claim that we possess them [i.e. the dispositions of knowing the principles], because then we should fail to notice that we have cognition which is more accurate than demonstration. If, on the other hand, we acquire [these dispositions] without having them before, how do we come to cognise and learn the principles unless on the basis of pre-existing cognition? For it is impossible, as we already noted in connection with demonstration. It is obvious, then, that it is not possible to have such dispositions. However, [it is equally impossible for them] to arise in us if we are completely ignorant and have no cognitive dispositions whatsoever. Therefore, we must have a capacity, but not the sort that would be superior in accuracy to the dispositions [of knowing the principles]. And this capacity

seems to belong to all animals. It is the innate capacity to make distinctions which is called 'perception'. Among those which have perception, for some there remains a trace of what has been perceived, for others this is not the case. For those which do not retain a trace, ... there is no cognition outside perception. Those for whom the trace remains, it is possible to keep it in the soul. When many such traces have occurred, there will be such a distinction that for some, reason is developed through the traces; for others there will be no reason. Thus from perception comes memory, as we say, and from many memories concerning the same thing, experience arises; for many memories in number constitute a single experience. From experience or from a whole universal which has come to rest in the soul, from the one along with the many that is the same in all of them, becomes the starting point of art and knowledge: if it is concerned with becoming, [it will be the starting point] of art; if with being, of knowledge. (Aristotle, *Posterior Analytics* II.19, 99b26–100a9)

Aristotle argued that, on the one hand, it is impossible for the starting points of knowledge to be innate in the soul; on the other hand, it is equally impossible to acquire them without any pre-existing knowledge. The pre-existing knowledge or cognition needed to acquire real principles is gained from perception (a); Aristotle's reference to a discussion on demonstrations (99b30) is to *Posterior Analytics* I.1, 71a1–2, where he claims that all learning involving reasoning is based on pre-existing knowledge. In the quoted passage, which is concise and difficult, Aristotle claims that a starting point for knowledge is formed in our soul from, or on the basis of, experience. Experience is a memory-based non-universal generalisation of what has been perceived. However, the process of acquiring universals from experience is not merely an empirical process, because our intellect has to be so disposed as to receive the universals. This is why, unlike non-human animals, in human beings experience leads to an instalment of genuinely universal notions in the soul. In the *Phaedo* 96c5–8, Plato mentions the theory according to which knowledge comes about from perceptions through memory and belief by virtue of the belief achieving a fixed or instilled status, but rejects it. (Aristotle does not talk about beliefs at all in his account.) That Aristotle is talking about notions rather than propositional principles can be seen from the examples he gives later (human being, a certain kind of animal, animal, 100b1–3). For the debate concerning the propositionality of the principles, see Charles 2000, 264 n. 37. For a more general discussion of the passage and references, see Tuominen 2010b, 188–192; Tuominen 2007a, 102–110; Leshner 1973; Kosman 1973; Burnyeat 1981; Kahn 1981; McKirahan 1992, 243–244.

6 Platonists on Innate Knowledge, Natural Conceptions and Empirical Generalisation

a. Intellectual apprehension is the activity of the intellect grasping the primary intelligibles. This seems to be two-fold: the one before the soul comes to be into this body, when it grasps the intelligibles; the other one after it has been led into this body. Of these, the one which takes place before the soul comes to be in the body was named ‘intellectual apprehension’ proper; when the soul comes to be in the body, that which was then called ‘intellectual apprehension’ is now called ‘natural conception’, being a sort of intellectual apprehension stored up in the soul. Thus, when we say that intellectual apprehension is the starting point for epistemic reasoning, we do not talk about the one we have now in the incarnate life, but the one when the soul was without the body... and what is now called ‘natural conception’ and ‘knowledge without qualification’ and ‘wings of the soul’, which is also memory. (Alcinous, *Didaskalikos* IV.6.1–12 (155.21–27))

b. There are two stages of the journey for all, one when they are going up and one when they have arrived above. The first leads from the regions below; the second is for those who are already in the intelligible realm and have gained their footing There, but must still travel till they reach the furthest point of the region; that is the ‘end of the journey’, when you reach the top of the intelligible. (Plotinus, *Enneads* I.3.1, 12–18)

c. The lover (into whom the musical [type] may turn, and then either stay at that stage or go farther) has a kind of memory of beauty. Yet he cannot grasp it in its separateness, but is overwhelmingly amazed and excited by visible beauties. (Plotinus, *Enneads* I.3.2, 1–4)

d. But the philosopher – he is the one who is by nature ready to respond and ‘winged’, we may say, and in no need of separation like the others. He has begun to move to the higher world, and is only at a loss for someone to show him the way. (Plotinus, *Enneads* I.3.3, 1–4)

e. We have the rational principles [of things] in accordance with our essence, and our cognition of them occurs as if we would exhale. We do not have them in actuality and in accordance with projection. (Proclus, *Commentary on Alcibiades I*, 192.3–4)

Alcinous, a middle Platonist in the second century CE, makes a distinction between intellectual apprehension proper and ‘natural conception’ (*phusikē ennoia*). The former, he says, is possible only in the state in which the soul has not yet entered the body. However, when in the body, the soul still has the intelligible objects or acts of intellectual apprehension (*noῦσεis*, IV.6.7) stored in it (**a**). He seems to assume that the embodied soul cannot access those objects directly, nor is it capable of intellectual apprehension proper, but can

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only entertain them indirectly by having natural conceptions of things. Given that the expression ‘natural conception’ also occurs in Stoic sources, some scholars have tended to see a Stoic account (as in **9a** below) of how notions are formed in Alcinous (Schrenk 1991; Sorabji 1993, 73; Gerson 1999, 73). Considering the many references to a Platonic theory such as ‘the wing of the soul’ (see also *Phaedrus* 246e1), and the identification of natural conceptions to memory, it is much more likely that Alcinous is adopting a view in which all truthful conceptions which embodied humans are capable of having are based on recollecting the acts or objects of intellectual apprehension proper. For an interpretation emphasising the Platonic elements in Alcinous, see also Dillon 1993, 67–68. A further and somewhat different articulation of this model can be found in Sedley 1996.

Even though Plotinus normally distinguishes quite sharply between ordinary reasoning and intellectual apprehension proper, his treatise on dialectic (*Ennead* I.3 quoted in **b–d**) states that empirical generalisation, conceptual thought, and arguments are all necessary, though not sufficient, for intellectual apprehension proper. His description resonates with Plato’s *Phaedrus* and *Symposium*. It might sound puzzling that in **b** Plotinus seems to say that the intellect is moving (‘they still travel’), since proper intellectual activity is not, according to Plotinus, temporal. For Plotinus’ theory of movement (*kinēsis*) and its relation to activity (*energeia*), see Emilsson 2007, 34–38.

As Proclus notes in his commentary on the Platonic *Alcibiades I*, it was a problem for later Platonists that, in the dialogue, the theory of learning as recollection seems to be denied. Proclus, however, argues that no such conclusion needs to be drawn. By contrast, what is said in the *Alcibiades I* is consistent with the general Platonic doctrine that even though there is innate knowledge in the soul, this knowledge is not articulated and the person is not necessarily aware of possessing it (**e**). The purpose of inquiry is to articulate this knowledge and, according to Proclus, this involves projecting the innate principles (*logoi*) in actual discursive thought (see also Proclus, *On Alcibiades* 189,7 [‘pulsating’ knowledge]). One of the special features of Proclus’ account is that the essential principles (*ousiōdeis logoi*) are the principles which structure the soul, i.e., constitute its being. When they are projected (*proballein*) in thought, they become actualised as something that we know not only latently. In addition to these innate principles, we also have notions which are ‘later-generated’ (*husterogenēs*, a standard way of describing notions abstracted from experience in late antiquity) universals (*katholou*) in our soul which are abstracted from experience. According to Proclus, even though we carry around the innate principles in our soul, they remain hidden to us unless we are ‘awakened’ by perceptual experience and the notions which we abstract from it. However,

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as Plato did, Proclus also argues that abstraction is not even possible without the innate principles in the soul and, therefore, the abstracted notions are secondary to the innate principles despite being prior in the temporal order of cognition. For Proclus' account of the innate principles, see Steel 1999.

7 Receptivity of the Human Intellect

a. Now, if intellectual apprehension is like perceiving, it would either involve being affected in some way by the intelligible object or something similar. [Our intellect] must, then, be unaffected, but capable of receiving the form, being potentially like the form but not [actually] it; and the intellect must be related to intelligibles as the perceptual capacity is related to perceptibles. Therefore, because the intellect is able to grasp everything, it must be unmixed, as Anaxagoras says, in order to master [the objects], i.e. in order to know [them]. This is because any intervening object would constitute an obstacle for [grasping] what is different. Consequently, the intellect cannot have any other nature than this: being a potentiality. (Aristotle, *De anima* III.4, 429a13–22)

b. [T]he intellect is in a way potentially the intelligible objects, but it is nothing in actuality before it grasps them; 'potentiality' is to be understood in the same way that there is potential writing on a writing tablet on which nothing has actually been written yet; this also happens in the case of intellect. (Aristotle, *De anima* III.4, 429b30–430a2)

c. The material [i.e., the potential] intellect is merely a suitability for receiving the forms, analogously to a writing tablet without any writing on it. Or, better, it should be compared to the unwritten state of the tablet and not the tablet itself. This is because the tablet itself is an existing thing, and hence the soul – or the person who has the soul – is rather like the tablet, whereas the so-called material intellect in the soul is like the emptiness of the tablet or the tablet's suitability [for being written on]. (Alexander of Aphrodisias, *De anima* 84.24–85.1)

These passages express the assumption that Aristotle (**a–b**) makes and Alexander specifies (**c**): our intellect receives the intelligible objects. The objects are received accurately because the intellect has no nature of its own and, hence, as Alexander points out, should rather be compared to the unwritten state of the writing tablet than the tablet itself (**c**). The main point of supposing such pure receptivity is the following: If the intellect had a

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nature (Y) it could not become the form of the object (X); it would become the object as somehow affected by its nature (Y+X). However, since our intellect has no nature of its own, it is capable of becoming the form of the object and our intellectual apprehension of the form is correct. The assumption of receptivity does not entail that all human thought should be characterised as reception. Rather, the idea applies to the reception of simple intelligible objects and possibly also to the process when we come to grasp explanatory relations between things. When we have received the objects or come to grasp something, we can activate these thoughts or objects in thought on our own initiative. Further, even though the potential intellect is receptive, its receptivity is selective to the essential features of objects: it receives the form and accidental properties are not part of the form or determined by it.

In Alexander, the assumption of the receptivity of the human potential intellect is problematic since Alexander also supposes that the intelligible objects need to be abstracted from the external material objects. The problem is that he also supposes the potential intellect to be entirely without a nature of its own: how can something that is nothing in actuality perform the abstraction? For the problem, see Moraux 1942, 1967; Bazán 1973; Schroeder 1982; Sorabji 2005, 104. It has been argued (Tuominen 2010a) that even though the problem cannot be directly solved in Alexander, it points to an important and philosophically sound supposition in Alexander's theory. The motivation for proposing a theory of receptivity for intelligible objects is to explain the unaltered objectivity of the conception of the world as grasped by the intellect.

8 Active Intellect

a. Since, just as in nature as a whole, there is something serving as matter for each kind of thing (and that is what is potentially all of them), and something else that is their explanation and productive of them, ... there must be these differences in the case of soul as well. In this way there is, on the one hand, the intellect which is what it is by becoming all things, and, on the other hand, [the intellect which is what it is] by producing all things as a sort of disposition like light, since in a way light makes potential colours into actual colours. And this kind of intellect is separable and not capable of being affected, and not mixed, being in essence actuality. (Aristotle, *De anima* III.5, 430a10–18)

b. This [productive intellect] will be the form which is intelligible in the highest degree and in the most proper sense, such that it is without matter. For it applies to

all cases in which that which is something in the highest degree and in the most proper sense is the cause for other things to be the way they are. In this way what is visible in the highest degree – such as light – is also the cause for all other visible things being visible... Similarly, that which is intelligible to the highest degree and on the basis of its own very nature is reasonably the cause for intellectual apprehension of all other objects. This kind of being is the productive intellect. For if there were nothing intelligible in nature, none of the other things would become intelligible, as was said before. Furthermore, if this kind of intellect is the first cause, which is the reason of being for all things, it will be productive in this sense too, namely by being the reason of being for all of the intelligible objects. And this kind of intellect is separate, not capable of being affected and not mixed with anything ... And Aristotle has shown that this kind of being is the first cause, which is also intellect in the most proper sense. (Alexander of Aphrodisias, *De anima* 88.24–89.18)

c. [A]nd such an intellect is one that comes to be in us from outside and is indestructible. (Alexander of Aphrodisias, *De anima* 90.19–20)

d. This is what is intelligible in its own nature and an actual intellect, and it becomes the cause for the material intellect to separate, imitate and grasp and make each of the enmattered forms intelligible to it by reference to such a form. It is the productive intellect that is also said to come ‘from outside’, [and this intellect] is not a part or capacity of our soul, but comes to be in us from outside when we grasp it. (Alexander of Aphrodisias, *Mantissa* 108.19–24)

e. On the basis of these claims it is appropriate to puzzle over those who regard the productive intellect to be, according to Aristotle, the first god or who think that it is the premises and the knowledge that comes to us later from those premises. Those who consider [the productive intellect] to be the premises only deafen themselves and do not hear the philosopher shouting out loud that this intellect is divine and not capable of being affected, and that its essence and actuality are the same, and that it only is immortal, eternal and separate. Those, in turn, who suppose him to be saying that the productive intellect is the first god, disregard something in this same passage. Having first stated that in all of nature there is both matter and that which moves and perfects matter, he [Aristotle] claims that it is necessary for these differences to belong to the soul, and also that there is an intellect which becomes all things and another kind of intellect which produces all things. (Themistius, *In De anima paraphrasis* 102.30–103.4)

f. It is in this case our task, as is necessary, to grasp carefully and meaningfully what he says now with respect to his whole thought and to what he says elsewhere about intellect. Given that we have shown thousands of times and more, in the words put forward by Aristotle, that he intends the rational soul to be separate and immortal, it is clear that even though he likens it here to a blank writing tablet, he does not mean it [i.e., the rational soul] to have the forms in the sense of first potentiality (as the semen is said to be a man potentially) ... [S]o clearly the intellect in actuality perfects the intellect in potentiality and leads it to actuality, not by imposing forms on it which are not in it, but by throwing light on forms which are hidden and covert

because of a murkiness caused by birth: and this he calls ‘first potentiality’... He likens the intellect which enters [the chain of] generation to a person who sleeps or is delirious. (Philoponus, *In De intellectu*, ed. Verbeke, 38.99–39.7; 40.34–43)

g. It is thus evident that the fourth opinion is true: that Aristotle asserts the same intellect to be both potential and actual and to be transformed into that which is actual from that which is potential and to be led to actuality by another intellect which itself is in a human soul, obviously in that of a teacher, which was itself once led to actuality from potentiality. (Philoponus, *In De intellectu*, ed. Verbeke, 48.28–32)

Aristotle’s brief account of the active intellect (**a**) left room for various interpretations from the very beginning. One debated question was whether the active intellect is supposed to be in individual human souls or not. Alexander of Aphrodisias claimed that the active intellect is not in the human soul but belongs to the prime mover (**b–c**). Those who argued that the active intellect cannot be a divine intelligence often came to the conclusion that the intellect is not individual at all. Themistius’ interpretation seems to be that there is only one intellect of which all human beings have a share (**e**). This interpretation to some extent resembles the Plotinian Intellect as a hypostasis of its own, and was developed in the medieval Arabic tradition. For the idea that the intellect comes from without (*thurathen*, **c**) in Aristotle, see *De generatione animalium* II.3, 736b28–29: ‘The only [possibility] which is left is that the intellect comes from without and that it is divine’. Even though this passage contains an expression that was later used to express the supposition that there is a separate divine intellect (that of god (**b–c**)), Aristotle does not necessarily express such a view here.

In the appendix of Alexander’s *De anima* (called *Mantissa*), the role of the active intellect is specified as that which enables the potential intellect to perform the abstraction of intelligible objects (**d**); cf. *Mantissa* 107.21–34. On the *Mantissa*, see Sharples 2004; Accattino and Donini 1996. On the dating of the treatise with respect to Alexander’s *De anima*, see Bergeron and Dufour 2008, 12–15.

Themistius’ reference (in **e**) is to Aristotle’s *De anima* III.5, 430a10–15. For Themistius’ account, see also his *In De anima paraphrasis* 99.8–10. For the interpretation that the active intellect has to be in us, see also Pseudo-Philoponus *In De anima* 537.18–24 and 538.4–10. The latter passage also contains a reference to Plato’s *Philebus* (39b): ‘It should be known, then, that actual intellect is said to make all things because it inscribes the imprints of all things in potential intellect. That is why Plato also likens it to a painter, and Aristotle from the outset proposes that it is a painter. For if potential intellect becomes all things, actual intellect makes all things. So this can belong to the human intellect. For it is not intellect from outside that inscribes all things in potential intellect, but rather actual intellect *in us*’ (Charlton’s translation 2000

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slightly modified). The reference to the painter in Aristotle is unclear. The author of this Greek commentary, who is most probably not the historical Philoponus, provides an extensive summary of the views on the subject; see Pseudo-Philoponus *In de anima* 534.19–539.13. The same kind of argument that we find in Themistius and pseudo-Philoponus is also found in Pseudo-Simplicius' *In De anima* 240.1–6. The position of Pseudo-Simplicius involves complex distinctions between different kinds of intellect (see, e.g., Steel 1978, 121–145; Blumenthal 1982, esp. 89–91). It has been argued that the commentary is by Priscian of Lydia; see Bossier and Steel 1972; cf. also Perkams 2005.

In some commentaries we also encounter a Platonising interpretation of Aristotle's account (f). The author, probably the historical Philoponus whose treatise on the intellect has been preserved in 13th-century Latin translation, has some difficulty explaining away Aristotle's comparison of the intellect to an empty writing tablet. In Philoponus the Platonising account is connected with the interpretation that the active intellect is a teacher's intellect (g). Cf. also 45.53–59; 50.75–80; 51.95–99. It is not entirely clear how the interpretation of the active intellect as a teacher's intellect is to be connected with the theory of recollection. In 51.95–99 Philoponus says that the teacher perfects the potential intellect of the pupil in such a way that it 'makes the potential intellect receptive of all'. Yet, it is not articulated how such reception comes to be understood as recollection.

Arguments which resemble the ones given by the commentators still figure in the discussion on this difficult topic. Victor Caston, for example, argues (1999) that the kind of objection Themistius directs at Alexander is not inescapable because Aristotle does not necessarily mean that the difference between an active and a receptive counterpart should exist in one and the same kind of soul. Rather, it may be a difference between two kinds of soul. For the discussion, see also M. Frede 1996; Kosman 1992; Menn 1992; for Alexander's interpretation, see Tuominen 2006.

9 Stoic and Epicurean Preconceptions and the Sceptic Arguments Against Them

a. The Stoics say that when a human being is born the commanding part of his or her soul is like a tablet well-suited for being written on; on this each one of the conceptions are written. The first manner of inscription is the one through the senses. For having perceived something, such as white, they have a memory of it when it

has departed. And when many memories of a similar kind have occurred, then we say that we have experience, since experience is a multitude of appearances of a similar kind. Of conceptions some are acquired naturally, and in a non-craftsmanlike manner, in the ways mentioned above; yet others through our own learning and concentration. The latter are called conceptions only, the former also ‘preconceptions’. Reason, in accordance with which we are called ‘rational’, is said to be completed in the ways just mentioned during the first seven years. (Aëtius, *Placita* IV.11.1–4=SVF 2.83=LS 39E)

b. It is by direct confrontation that we come to grasp perceptible objects, [whereas] those things which are closely related, such as Socrates on the basis of a picture, [we grasp] by similarity. [Other things are grasped] by analogy: on the one hand, by magnification, like Tityos and the Cyclops, and, on the other hand, by diminution in cases like the Pygmies; the centre of the earth is grasped by analogy on decreasing spheres. [Yet other things we come to grasp] through transposition, such as eyes on the chest, [or] through composition, like the Centaur. Death is grasped by opposition. Some [objects] are grasped through transition, like the sayables and place. Justice and goodness are grasped naturally. Some things are understood through privation, like handlessness. (Stoics according to Diogenes Laertius, *Lives of Philosophers* VII.53=LS 39D)

c. Preconceptions are common to all human beings, and a preconception is not in conflict with another preconception. For which of us would not agree that the good is beneficial, that it is choice-worthy and to be pursued and sought after in all situations? And which of us would not agree that the just is fine and appropriate? From where could a conflict arise? (Epictetus, *Dissertationes* I.22.1)

d. They [the Epicureans] say that the preconception is like a correct apprehension or a belief, or a stored conception or a universal comprehension, i.e., memory, of something that has appeared many times externally, such as ‘a human being is such and such a thing’. For at the same time as we utter ‘human being’, immediately its figure in accordance with the preconception is grasped because the senses give the lead. Indeed, for all names that which primarily underlies them is evident, and we would not have inquired into the object of our inquiry if we had not cognised it previously, for example, whether the thing standing far off is a horse or a cow. For one must have previously come to know the forms of horse and of cow in accordance with the preconception, since we could not even name anything unless we learned its figure through the preconception. Therefore, the preconceptions are evident and what is opined depends on something previous and evident, i.e., that to which we refer when saying, for example, ‘How do we know whether this [thing] is a human being?’. (Epicurus, *Letter to Menoecus* in Diogenes Laertius, *Lives of Philosophers* X.33=LS 17E.)

e. It is commonly accepted that a preconception and a conception must exist in us before any object that we inquire into... We are so willing to accept this and keep ourselves at such a distance from claiming that we would not have preconceptions of the inquired objects, that we would rather consider ourselves as having many

conceptions and preconceptions of those objects: since we are not able to decide between them and to reveal which ones are the most authoritative, we return to the suspension of judgement and non-inclination. (Sextus Empiricus, *Adversus mathematicos* VIII.331a–332a)

The Stoic description of the acquisition of concepts (*ennoiai*) and preconceptions (*prolēpseis* defined as ‘naturally formed general conceptions’, *ennoia phusikē tōn katholou* in Diogenes Laertius VII 54.), on the one hand, employs the image of a tablet which is well-suited for receiving writing on it (**a**) – an image which we also encountered in Aristotle (**5a** above); for Aëtius’ estimate of seven years until the completion of the preconceptions, see the fourteen-year version in Diogenes Laertius VII.55–56=LS 33H3; see also Galen, *On the Doctrines of Hippocrates and Plato* V.2.49; V.3.1=SVF 2.841. On the other hand, the Stoics also point to several different mechanisms by which perceptions are interpreted and organised to form notions of a great variety (**b**). What is more, in addition to the empty writing tablet analogy, there are Stoic sources which refer to an idea that at least some notions are intrinsic or innate (*sumphutos* in Plutarch, *On Common Notions against the Stoics* 1070c; *innascitur* in Seneca, *Letter* 121.17,20, *innatus* in Cicero, *De natura deorum* II.12–15) or implanted (*emphutos* Chrysippus according to Plutarch, *De Stoicorum repugnantiis* 1041e); for the translations of the key terms, see Jackson-McCabe 2004. A traditional view among scholars has been that the early Stoics (most notably Chrysippus) endorsed the ‘empirical’ account whereas Epictetus as a later Stoic opted for a more Platonising form of innatism. Some scholars, e.g., Sandbach (1930), have also tried to explain away any innatism from the Stoic theory. Further, whereas the naturally formed conceptions (in **a**) correspond to those which are formed through direct confrontation with the objects (in **b**), the conceptions of the justice and goodness are said to be formed naturally in **b**, and it seems that such conceptions could not be formed in direct confrontation with perceptible objects (according to Cicero *De finibus* III.33=LS 60D, the notions of the good and the just are formed through a kind of induction which he calls ‘analogy’; see also Sextus, *Adversus mathematicos* VII.59; IX.394). A plausible way of reconciling these elements is to say that the Stoic preconceptions and naturally formed conception of goodness are dispositionally innate (Dominic Scott’s term), i.e., that human beings have a natural inborn tendency to form them but they can only be formed through evaluating experience. Jackson-McCabe (2004) argues that this happens through the process of *oikeiōsis* in the way that first human beings learn to discern what agrees with their nature as animals and thus form a vague conception of what is good in this sense. Such preconceptions arise in us undesignedly, as Aëtius

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points out **(a)**, and thus they are not fully articulated explicit thoughts or definitions. However, a proper articulated notion of goodness requires evaluation of experience and careful consideration of what agrees with the nature of human beings as rational beings and only through such a process a proper notion of the good can be acquired.

In general, the Stoics seem to have understood preconceptions as propositional rational impressions or appearances or stored thoughts (see Plutarch, *On Common Notions* 1084f–1085a; Diogenes Laertius VII.61). However, in the passage from Aëtius, non-propositional preconceptions ('the good' and 'the just' in **a**) are also found, and Alexander of Aphrodisias interprets the Stoic preconceptions in this way (*De mixtione* 217.2–19). Therefore, it is possible that the preconceptions were not identified with the propositions expressing their content, but they should rather be conceived of as dispositions to think in certain ways of the objects to which the preconception applies. (This suggestion is made, e.g., by Håvard Løkke forthcoming.)

The Epicurean explanation of how the preconceptions are formed also resembles the Stoic account. However, the Epicurean preconceptions seem to be perceptual presentations (cf. 'delineation' or 'sketch', *tupos* in **d**) rather the propositional thoughts. He also argues (Diogenes Laertius X.38, immediately following the text in **d**) that our understanding of general terms is not in essence linguistic. If this were the case, we would need definitions and proofs *ad infinitum*. According to Epicurus, there is no infinite regress because our understanding of the world consists of preconceptions which are immediate, self-evident and perceptual; according to Epicurus, they must be 'seen' (*blep-esthai*), not proved or defined. The reference to form in **d** is to the perceptible outlook of a thing, not its Platonic or Aristotelian intelligible form.

The sceptics argued against the assumption shared by the Stoics and the Epicureans according to which preconceptions are of natural origin, and hence reliable. Sextus points to the fact that the preconceptions which the Stoics and the Epicureans proposed, particularly of god, were contradictory, and thus could not both be true (**e**). Plutarch, in turn, assumes that the preconceptions as criteria of truth should appeal to some kind of common sense (in today's sense of the word). He argues that the Stoics' preconceptions do not conform to their own methodological principles, since the Stoic alleged preconceptions (e.g., of good) are alien to most humans (Plutarch, *On Common Notions*). The translation of 'preconception' (Greek *prolēpsis*) as 'common sense' (Latin *communis sensu* also *communis mens*) originates from Cicero; see Brittain 2005. The sorites argument, which points to the difficulty of determining the borders of concepts, was also used as a sceptical argument against natural preconceptions, see, e.g., Sextus, *Adversus mathematicos* IX.182–184.

Chapter 17

Concepts and Concept Formation in Medieval Philosophy

Toivo J. Holopainen

The opening passage of Aristotle's *De interpretatione*, usually read together with Boethius's two commentaries on the work, was an important source for the medieval understanding of concepts. Aristotle there refers to the conceptual entities in the mind as 'passions of the soul' (*passiones animae*), but Boethius prefers to call them 'understandings' (*intellectus*). These understandings are likenesses (*similitudo*) of things and they mediate between spoken words (*vox*) and external things (*res*) in signification. The concepts are natural in the sense that they are the same for all nations. Boethius's commentaries were widely read since at least the twelfth century. The writings of Augustine were another main source already available in the early Middle Ages. Augustine is the classic authority for the view that the universals exist *ante rem* as ideas in the divine mind. He is also known for the theory of illumination, according to which human beings depend on the assistance of divine light for their intellectual operations. Augustine holds that illumination plays a role in concept formation, but he does not present any detailed account of how this takes place. In addition, Augustine develops the view of interior words of a specific kind. He distinguishes between two intellectual powers in the human mind: memory (*memoria*) as a 'treasure-house' of latent knowledge, and intelligence (*intelligentia*) as the power that brings pieces of knowledge into the focus of actual attention. The interior word (*verbum interior*) is an act of intelligence born from a piece of knowledge in the memory. Augustine develops this view in a theological context to provide an analogy for the Trinitarian doctrine. Anselm of Canterbury, in the eleventh century, brings together Augustinian and Boethian ideas in his analysis of internal speech. Anselm's synthesis affected the way in which Augustine's remarks about the interior word were construed in later discussion (1).

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The Arabic thinkers continued the Ancient discussion about active and passive intellect and their nature and function. (The active intellect was also called ‘agent intellect’, and various names were used of the passive intellect in its different states, including ‘material intellect’ and ‘potential’ or ‘possible’ intellect.) According to Avicenna, the passive intellect is the highest immaterial part of the human soul, whereas the active intellect is a separate substance. In his view, human cognition about material objects is, ordinarily at least, based on an abstraction in which the form of the object is gradually separated from the matter and attachments related to matter. In an advanced stage of the process, after the external and internal senses have performed their functions, the active intellect illuminates the images of things in the imagination and the passive intellect, and the completely abstracted form of the thing becomes imprinted on the passive intellect. At the same time, Avicenna stressed that the intelligible forms emanate into the passive intellect from the active intellect. They will not be stored in the soul but will be received again when needed. Averroes famously held that not only the agent intellect, but also the material intellect, is a separate substance which is common to all humans. Nevertheless, the agent intellect and the material intellect function in each human being closely connected to his or her individual sensory experience, and are thus attributed to him or her (2).

The Aristotelian-Arabic *De anima* tradition of psychology entered the Latin discussion gradually during the latter half of the twelfth century and the first half of the thirteenth century. It interacted in various ways with the Augustinian theological psychology, which had been predominant until that time. The view that the active intellect plays a central role in concept formation was widely shared in the early thirteenth century. However, few Latin thinkers held that active intellect is a separate substance. Combining Arabic influences with the Augustinian doctrine of illumination, some thinkers identified active intellect with God (‘Avicennising Augustinianism’). The most common position, however, was to take both the active intellect and the possible intellect as powers of an individual human mind. This was taken to be Averroes’s view, and Averroes’s sayings were used for criticising Avicenna’s view of active intellect. A more accurate interpretation of Averroes was achieved around the middle of the thirteenth century, and he gained some followers (Latin Averroism) (3).

In the Aristotelian view, the intellectual cognition of an external object requires the presence of the object’s form in the intellect. The late thirteenth-century standard account of how the form of the object gets into the intellect further developed the description of the complex psychological mechanism that had emerged in the Arabic tradition. Intellectual cognition is based on sensory cognition, but there is a major shift between these two, because both the organs and the objects of sense perception are material, whereas intellectual cognition is immaterial and universal. The active intellect plays a central role in this transfer from the sensory to the intellectual. The sensory information processed by the interior senses is stored in the sensory memory as phantasms, which are sensory likenesses or representations of particular things (cf. pp. 141, 210, 216 above). The active intellect illuminates the phantasms and abstracts the intelligible content in them by stripping them from their accidental features. The universal forms thus abstracted will be imprinted in the possible intellect as intelligible species (*species intelligibilis*), and the intellect can then use them in

intellectual operations. The intelligible species are universal representations of objects in the intellect, and some scholastic thinkers identified them as concepts. However, the standard view in the late thirteenth and the early fourteenth century was to regard the intelligible species and the concept as two distinct entities. The writings of Thomas Aquinas were instrumental in the development of this view, even though the details of his account vary from one work to another. In some important passages he distinguishes (1) the intelligible species, (2) the act of understanding and (3) the concept. Here, the intelligible species precedes the act of understanding and makes it possible, whereas the concept (*conceptio intellectus*) is seen as the end-product of the act. Thomas associates the concept both with the definition of the thing and with the Augustinian interior word (*verbum*) (4).

There was a great deal of dispute concerning issues related to concepts in the late thirteenth and early fourteenth century. Much of the argument revolved around Aquinas's ideas, but there were also some highly original contributions. Peter John Olivi was among the early critics of Aquinas's views. He identified the act of understanding as the concept, and denied that there are either intelligible species preceding such acts or end-products terminating them. Other critics of the intelligible species included Henry of Ghent and Godfrey of Fontaines. Against these criticisms, John Duns Scotus defended the necessity of postulating intelligible species which are distinct from concepts and precede the acts of understanding. Scotus and some others discussed the mode of existence which concepts have as end-products or objects of acts of understanding. It was assumed that concepts have a special mode of being: they exist 'objectively' or 'intentionally' by being objects of understanding, whereas the intelligible species are forms inhering in the intellect (5).

The thought of William of Ockham opens a new phase in medieval discussion on concepts. He developed an alternative to the *De anima* approach on the basis of his nominalist ontology. Ockham rejected the idea that intellectual cognition requires the presence of the object's form in the intellect, and he rejected the doctrine of species in all its forms, including intelligible species. He criticised the species as speculative and unnecessary and as a representationalist hindrance to direct realism in concept formation. This criticism was put forward earlier by Olivi, Durandus and others; however, for Aquinas and Scotus, the species in the intellect is an *activator* of the power of understanding, rather than its object. For Ockham, concepts are acts of understanding. More precisely, concepts are abstractive acts of understanding, as opposed to intuitive acts. An intuitive act of understanding is about a present particular object as existing, whereas the abstractive act of understanding does not require the presence of the object and is universal in the sense that it is applicable to many objects (say, to all the members of a species). In Ockham's view, the human mind is so constructed that it is capable of forming concepts of the things it encounters under suitable conditions. Ontologically, concepts are qualities: they are states in which the intellect can be. There is a strong emphasis on the viewpoint of logic and semantics in Ockham's approach. He developed a theory of mental language, and concepts or mental words are among the basic units of that language: they are terms of the mental language. As terms of a language, the concepts are signs, and they have the kind of semantic properties that terms have (6).

1 Ancient Latin Sources

a. What are spoken are signs of the passions in the soul, and what are written are signs of those that are spoken. And in the same way as written letters are not the same for everyone, so the spoken sounds are not the same. But the primary things of which these are signs, the passions of the soul, are the same for all; and those of which these are likenesses, namely the things, are also the same. (Aristotle, *De interpretatione* 1, Translatio Boethii)

b. Hence, there are these four: the thing, the understanding, the spoken word, and the written word. The understanding conceives the thing, the spoken words signify the understanding and, again, the written words signify the spoken ones.

The understanding is truly a passion of the soul. For unless the one who understands a thing bears a kind of likeness of it in his soul's reason, there is no understanding. For when I see a circle or a square, I conceive its form by my mind and a likeness of it is formed in my soul's reason, and the soul bears the likeness of the thing understood. Therefore, the understanding will be both a likeness of the thing and a passion of the soul.

Of these four, then, two are natural and two derive from human imposition, for spoken words and written words derive from imposition, whereas understandings and things are by nature. This is proved by the fact that different nations use various spoken words and written words, for the reason that they have themselves composed the spoken words they would use and the written words they would put in writing. But no-one has made up the understandings or the things: instead they are by nature, for what is a horse among the Romans is not a stag among the barbarians – the nature of the things is the same among different nations. Further, it is not the case that the barbarians regard as a dog what we understand to be a horse. The reason of the substances and understandings is the same among nations most unlike. (Boethius, *In Aristotelis Peri hermeneias commentarii I*, ed. Meiser (37–38))

c. In order to appear to translate word for word, we can call ideas either 'forms' or 'species' in Latin. But if we call them 'reasons', we surely move away from a proper translation – for reasons are called '*logoi*' in Greek, not ideas – but nevertheless, whoever wants to use this term is not in conflict with the thing itself. For ideas are particular principal, steady, and immutable forms or reasons of things. They are not formed themselves, and hence they are eternal and always remain in the same way, and they are contained in the divine understanding. And while they neither arise nor perish, still everything that can arise and perish, and everything that does arise and perish, is said to be formed according to them ... The singular things are therefore created with their own reasons. But where should we judge these reasons to be, if not in the mind of the Creator? For he did not look at anything situated outside himself to establish what he established; it would be a sacrilege to think so. Therefore, as these reasons of all things that either are created or are to be created are contained in the divine mind, and there cannot be anything in the divine mind that is not eternal and immutable, and Plato calls these principal reasons of things

'ideas'; they are not only ideas, but they are also true, because they are eternal and immutable, and always stay the same way. And whatever there is, regardless of its way of being, comes to exist by participation in them. (Augustine, *De diversis quaestionibus octoginta tribus* 46.2)

d. ... we should rather believe that the nature of the intellectual mind is so formed that, being subjoined in a natural order, according to the disposition of the creator, to intelligible things, it will see these things [i.e., the geometrical things under discussion] in a sort of incorporeal light of its own kind, just as the eye of the flesh sees the things which lie about it in this corporeal light, a light which it is able to accept and to which it is suited. (Augustine, *De trinitate* XII.15.24)

e. For that light is already God Himself; the soul, on the other hand, is a creature, although in reason and intellect it is made in his image. And when the soul tries to fix its gaze upon that light, it quivers in its weakness and it is not quite able to do so. Yet it is from this light that the soul understands whatever it is able to understand. (Augustine, *De Genesi ad litteram* XII.31.59)

f. But you will easily see that the numbers themselves are not perceived by the bodily senses, if you reflect that every number is named on the basis of how many times it contains one ... But if you have a true notion of 'one', you will certainly find that 'one' cannot be perceived by the bodily senses. Whatever is perceived by a bodily sense is clearly not one but many, for it is a bodily thing and so has countless parts. ... Moreover, if we do not perceive 'one' by the bodily sense, we do not perceive any number by that sense, at least of all those numbers that we distinguish with the understanding ... How, then, do we recognise that there is this secure, perpetual, and unchangeable order for all numbers ... unless we see it by an inner light of which the bodily sense knows nothing? ... For those to whom God has given the gift of reasoning and whose wit is not darkened by obstinacy, these and other such instances make it clear that the order and truth of numbers does not concern the bodily senses, but that it does exist, immutable and complete, and is there to be seen in common by everyone who uses reason. Many other things also suggest themselves which are present in common and, as it were, publicly, to those who use reason; these things are perceived by the mind and reason of each person individually, and yet they remain intact and unchangeable. (Augustine, *De libero arbitrio* II.8.22–24)

g. Whoever, then, is able to understand a word, not only before it sounds, but even before the images of its sound are considered in thought – this is a word that belongs to no language, that is, to none of the languages which are of different nations, of which ours is Latin – whoever, I say, is able to understand this, is already able to see through this mirror and in this enigma a certain likeness of that Word of whom it is said: 'In the beginning was the Word, and the Word was with God, and the Word was God' [John 1:1] ... The human mind, then, keeps in the treasure-house of the memory all these things that it knows by itself, by the senses of the body, and by the testimonies of others. From them a true word is begotten when we say what we know, but a word that is before all sound and before all thought of sound. For the word is then most like to the thing known, from which also its image is begotten,

since the sight of thought arises from the sight of knowledge. This is a word belonging to no language, a true word about a true thing, having nothing from itself, but everything from the knowledge from which it is born. (Augustine, *De trinitate* XV.10.19–12.22)

h. For in ordinary usage we recognise that we can express the same thing in three ways ... For example, I express a man in one way when I signify him by the word 'man', in another way when I think this same word silently, and in a third way when my mind beholds the man himself either by means of an image of a bodily thing (as when it imagines his sensible appearance) or by means of a reason (as when it conceives his universal essence, which is rational, mortal animal). Each of these three kinds of speaking has its own kind of words. Yet, the words of the kind of speaking which I mentioned third and last, since they concern things which are not unknown, are natural and are the same for all nations ... No other word appears so similar to the thing of which it is a word, or expresses it in the same way, as does that likeness which is expressed in the gaze of the mind of someone conceiving the thing itself. Therefore, it is rightly to be called the most proper and principal word for the thing. (Anselm of Canterbury, *Monologion* 10)

The opening passage of Aristotle's *De interpretatione* (**a**) and Boethius's comments on it (of which **b** is an extract) were important for the framework in which concepts were approached in medieval thought: there are concepts or 'understandings' in the human mind that correspond to the words (in particular, nouns) of spoken language; the concepts are natural in the sense that they are the same for all people, whereas spoken words are conventional and vary from nation to nation; semantically, concepts mediate between words and things: words primarily signify concepts and only secondarily the things in the world; concepts are likenesses of things, as the form of a square in the mind is a likeness of a square that has been seen. As *De interpretatione* and Boethius's commentaries were used in logic teaching, a medieval university student would come across these ideas in an early phase of his education.

Augustine gives his approval to the Platonic doctrine of ideas when these are interpreted as 'immutable forms or reasons of things' which are in God's mind. God creates the universe according to these ideas, and the created things participate in them (**c**). This view was shared by almost all Christian thinkers in the Middle Ages before Ockham. Augustine's theory of illumination (**d**, **e**, **f**) is obviously related to the same view. Augustine does not claim, however, that divine illumination makes it possible for human beings to see the ideas in the divine mind. Rather, the intelligible structure which human beings see in the divine light appears to be situated beneath the actual divine sphere. Augustine often uses mathematical examples to establish that the immutable intelligible structure is there for every rational mind to reach. He also

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discusses numbers, like ‘one’, to establish that there are notions that the human mind cannot form on the basis of sense perception alone (f). In the theological treatise *De trinitate*, Augustine works to provide analogies that elucidate the doctrine of the Trinity. One of the analogies is between the human interior word (*verbum interior*) and the Divine Word (*Verbum*), i.e. the second person of the Trinitarian God. In the background is a distinction between memory, which is a treasure-house of knowledge, and intelligence, which is a power that brings pieces of knowledge into the focus of actual attention. The human interior word is an act of intelligence born from a piece of knowledge in the memory, and in the same way the Word (the Son) is born from the Memory (the Father) (g). Bonaventure later offered a succinct statement of the interior word in the context of a Trinitarian analogy: ‘Moreover, if we consider the order, origin and relationship of these powers of the human mind, it leads us to the blessed Trinity itself. For from the memory arises the intelligence as its offspring, because we understand only when the likeness, which is in the memory, is reproduced in the gaze of the intellect, and this is nothing other than the word’ (Bonaventure, *Itinerarium mentis in Deum* 3.5). Like Boethian ‘understandings’ (b), Augustine’s interior words do not belong to any particular language and are the same for all people. In the eleventh century, Anselm of Canterbury brought together Augustinian and Boethian ideas in his division of three kinds of words (*verba*) and three kinds of speaking of a thing (h). Anselm tones down the idea that the interior word should be seen in contrast with a piece of knowledge in the memory, and he connects the interior word to the Aristotelian idea of ‘likenesses’. The connection between one kind of interior word and the definition of the thing is noteworthy.

2 Avicenna and Averroes on Intellectual Cognition

a. We say that the human soul first potentially understands and then comes to actually understand. But what comes into actuality from potentiality can only do so through some cause which is actually of that kind and brings it to actuality. There is, therefore, a cause by which our souls are brought from potentiality to actuality regarding intelligible things. But the cause of intelligible forms must be an actual intellect which possesses the principles of abstract intelligible forms.

This intellect is related to our souls in the same way that the sun is related to our sight. For just as the sun is actually seen in itself, and things that were not seen are actually seen in its light, this is also the case with this intellect in relation to our souls. For when the rational power considers the particular things which are in

the imagination, and this is illuminated by the light which is directed to us from the active intellect that we were talking about above, they become stripped of matter and its attachments, and are imprinted in the rational soul – not so that they themselves pass from imagination to our intellect nor so that the intention which depends on many things makes a likeness of itself ... but rather so that the consideration of these particulars prepares the soul so that what is abstract emanates upon it from the active intellect. (Avicenna, *Liber de anima* V.5 (ed. van Riet, 126–127))

b. The relation of this intellect [i.e. the active intellect] to what is understood is in one respect like the relation of light to colours. That is, just as light is that which makes colours become colours in act after they were in potency, and which gives the pupil of the eye that by means of which it receives colours, that is, transparency, similarly this intellect is the agent and creator for what is understood, and it gives the hylic intellect that by means of which it receives what is understood, I mean that it gives the hylic intellect something resembling the transparency in sight, as has become clear before. (Averroes, *Middle Commentary on Aristotle's De anima* (296), ed. Ivry (116), trans. Jari Kaukua)

c. It is clear that this [i.e. the active intellect] is in one respect an agent and in another respect a form for us, since it is up to our will to give birth to what is understood, that is, when we want to understand something that we have understood, our intellection of it is nothing else than first creating and secondly receiving what is understood. The thing that has the same status in relation to the intellect as the colours in potency have in relation to light is the individual intentions in the imaginative faculty, I mean that this intellect makes them become actually understood after they were in potency. It is clear about the matter concerning this intellect, which is a form for us in one respect and the agent for what is understood in another respect, that it is separate and that it is neither generated nor corrupted, for the agent must always be nobler than what is acted upon and the origin nobler than hyle. The intelligent and intelligible aspects of this intellect are essentially the same thing, since it does not understand anything external to itself. It is necessary that there is an active intellect here because the agent for the intellect must be an intellect, since the agent can only give a resemblance of what is in its substance. (Averroes, *Middle Commentary on Aristotle's De anima* (297), ed. Ivry (116), trans. Jari Kaukua)

d. For in the same way that the sight is not moved by colours except when they are actual (which does not take place except when the light is present, as the light is what draws them from potentiality to actuality), in the same way the imagined intentions do not move the material intellect except when they have been actually understood, which is not realised in them except when there is something present which is intellect in actuality. And it was necessary to attribute these two actions, namely receiving the intellection and making it, in us to the soul, even though the agent and the recipient are eternal substances, for the reason that these two actions depend on our will, namely, to abstract that which is understood and to understand it. For abstracting is nothing other than making imagined intentions

actual after they were potential, and understanding is nothing other than receiving these intentions. When we discovered that the same things, namely the imagined intentions, are transferred in their being from one order to another, we said that it is necessary that this happens due to an agent cause and a recipient (the recipient is the material cause, and the agent is the efficient cause). And when we discovered that we act through these two powers when we will, and nothing acts except through its form, it was therefore necessary to attribute these powers of the intellect to us. (Averroes, *Commentarium magnum in Aristotelis De anima* III, 18 (161D–E))

Avicenna combines Aristotelian and Neoplatonic ideas of concept formation by arguing that a common active intellect helps particular human intellects to understand the intelligible forms of things, which are present to internal or external senses, by producing the abstract universal forms in the passive intellect through illuminative emanation (a). See Davidson 1992; Hasse 2000; D’Ancona 2008. According to Averroes, both the agent intellect and the receiving hylic (material) intellect are immaterial eternal substances in which the particular human minds participate when they form the universal concepts of things. This takes place when the active intellect makes the intelligible aspects (intentions) of sensory forms in imagination actually intelligible by abstracting them from matter and particularity and the intentions are received by the material intellect – this is called understanding (b–d). See Ivry 2008a, b. Avicenna and Averroes did not operate with the idea of intellectual memory. Concepts as intelligible units are not stored in the soul, but the soul develops a disposition to receive them from the active intellect. The theories of Avicenna and Averroes influenced Latin discussions in various ways.

3 Varieties of the Theories of Intellection in Thirteenth-Century Latin Thought

a. The cognitive intellect is divided into two parts, of which one is called the ‘agent intellect’, and the other is called the ‘possible intellect’, which ‘is nothing actually before it understands’. The relation of the agent intellect to the possible intellect is like that of light to the sight. For as light makes the species of a colour to move over from the coloured thing to the eye, in the same way the agent intellect abstracts species from the phantasms which the material intellect has prepared for it, and it makes them in a way to move to the possible intellect. The agent intellect, hence, has two acts: that of abstracting species from phantasms, and that of arranging the abstracted species in the possible intellect.

Avicenna erred in this matter, for he assumed the agent intellect to be something distinct from the soul (namely, an intelligence or an angel), as the sun is distinct from the sight. But there is no doubt that this intellect is a power of the soul, since it is in the soul's power to engage in understanding when it wants to. (Anonymous, *De anima et de potenciis eius* (50–51))

b. Therefore the agent intellect is that particular agent which is needed for the operation of the speculative intellect, which agent intellect according to the Commentator is a part of the soul. According to Al-Farabi, Aristotle, and Avicenna, it is something else. (Roger Bacon, *Questiones supra libros Prime Philosophie Aristotelis*, ed. Steele, vol. X (298–299))

c. It should be noted, however, that intelligible things are divided into two kinds: one kind is infused or impressed from above; the other is acquired through mediation of corporeal and spiritual vision. Regarding an intelligible thing of the first kind, it holds that it reaches the intellectual soul without some other vision mediating, for this kind is entirely elevated above the sense. Augustine speaks of this kind in Book X of *Confessions* and Nebridius in Letter 83. Things are different with the second kind. For it consists in sensible things, and this kind therefore reaches the intellectual soul through the mediation of corporeal and imaginative vision, and not in any other natural way. In Book III of *De anima*, Aristotle seems to be dealing with this kind of intelligible thing and the way to understand it. For he says there that 'without phantasms, the soul does not understand at all', and a little later: 'that which understands thinks of the species in the phantasms'. (Robert Kilwardby, *De spiritu fantastico* 26)

d. Every cognition is produced by means of light and in the light, as the bodily eye is illuminated by the light of the sun or of a physical lamp so that it can see; and the eye of the mind is illuminated by the intelligible light which 'enlightens every man' [John 1:9], which is God, as Augustine teaches in Book I of *Soliloquies*, chapter 13. (Robert Kilwardby, *De spiritu fantastico* 164)

The anonymous treatise *On the Soul and Its Powers* (c. 1225) puts forward the view repeated by many Latin interpreters of Aristotle that the active intellect and the possible intellect are both powers of the human soul: one for abstracting the intelligible species from the phantasms and the other for receiving this species through which the understanding of the universal concept is actualised (**a**). See Bazán 2005; Pasnau 1995. While some writers of the first half of the thirteenth century took this to be Averroes's view as well, the role of the unity of the material intellect in Averroes's noetics was soon detected by many masters of arts and by theologians such as Albert the Great, Bonaventure and Aquinas. It was regarded as metaphysically problematic and also incompatible with the Christian view of the immortality

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of the individual soul. See Bazán 2005. Roger Bacon, a great admirer of Avicenna, repeats the early thirteenth-century view of Averroes in his questions on Aristotle's *Metaphysics* from 1240s, and contrasts this with Avicenna's theory of a separate agent intellect (**b**). He later equated the separate active intellect with God. See Hasse 2000, 203–223. Robert Kilwardby was one of the authors who developed the Augustinian 'illumination' theory of the intellect (**c–d**). Henry of Ghent refers to divine illumination as follows: 'When it [the intellect] reaches these incorporeal reasons (*rationes*), being illuminated by this kind of the eternal light, not as the object of knowledge but as a ground of knowledge, it achieves a sincere truth about these which it cannot receive from senses or phantasms' (*Quodlibet* IX.15 (262)). See also Pasnau 2011.

4 Intelligible Species and Universal Concept

a. As it is brought from potentiality of understanding to the act, this does not take place for the reason that it would have innate knowledge of some intelligible things, but for the reason that the intellect has from its maker, or from its nature, a natural potency in virtue of which it knows the nature of all the intelligible things when they are being presented to it. And this potency is the potency of the material (or possible) intellect. And presenting the intelligible things takes place through imagined intentions by the active intellect. (Siger of Brabant, *Quaestiones in librum tertium De anima* III.12 (40))

b. But since Aristotle did not hold that the forms of natural things subsist without matter, and since the forms which exist in matter are not actually intelligible, it followed that the natures or forms of sensible things which we understand are not actually intelligible. But a thing can be brought from potentiality to actuality only by some thing which is actual, as the sense is made actual by the sensible things which are actual. Therefore, it was necessary to posit an intellectual power which would render them actually intelligible by abstracting the species from material conditions. And this is why it is necessary to posit an active intellect. (Thomas Aquinas, *Summa theologiae* I.79.3)

c. But nothing corporeal can produce an impression on an incorporeal thing. For this reason, according to Aristotle, the mere impression of corporeal sensible things is not enough to cause an intellectual operation, but something nobler is needed: for 'the agent is more honourable than the thing acted upon', as he himself says. It is not the case, however, that the intellectual operation would be caused in us by the mere impression of some higher things, as Plato had claimed. Instead, that higher and

nobler agent, which he calls the active intellect and which we have already treated above, makes the phantasms received from the senses actually intelligible by means of an abstraction of a kind. In this way, then, the intellectual operation is caused by the sensory power as far as the phantasms are concerned. But because the phantasms are not sufficient to bring about a change in the possible intellect and they have to be made actually intelligible by the active intellect, it cannot be said that sense cognition would be the total and perfect cause of intellectual cognition; rather it is the material of the cause in some way. (Thomas Aquinas, *Summa theologiae* I.84.6)

d. It is the case that the phantasms are illuminated by the active intellect, and it is the case that the intelligible species are abstracted from them by the power of the active intellect. The phantasms are illuminated by it, for as the sentient part of the soul is made more powerful by its connection with the intellectual part, so by the power of the active intellect phantasms are made fit for intelligible intentions to be abstracted from them. And the active intellect abstracts the intelligible species from the phantasms, insofar as it is by the power of the active intellect that we are able to receive in our thought the natures of the species without their individual features, and the possible intellect is informed by their likenesses. (Thomas Aquinas, *Summa theologiae* I.85.1, ad 4)

e. The relation of intelligible species to the intellect is like that of sensible species to the sensory power. But a sensible species is not that which is sensed, but rather that by which the sensory power senses. Therefore, the intelligible species is not that which is actually understood, but that by which the intellect understands ... That which is understood is by its likeness in the one who understands. According to this it is said that that which is understood in actuality is the intellect in actuality, insofar as the likeness of the thing understood is the form of the intellect, as the likeness of the sensible thing is the form of the sensory power in actuality. Hence, it does not follow that the abstracted intelligible species is that which is actually understood; instead, it is a likeness of it. (Thomas Aquinas, *Summa theologiae* I.85.2 c, ad 1)

f. Sometimes the intelligible species is in the intellect only in potentiality, and then the intellect is said to be in potentiality. But sometimes it is in the intellect in fully complete actuality, and then the intellect actually understands. Sometimes it is in a middle state between potentiality and actuality, and then the intellect is said to be habituated. It is in this way that the intellect conserves the species, even when it does not actually understand. (Thomas Aquinas, *Summa theologiae* I.79.6, ad 3)

g. But this conception of the intellect in us is properly called the word, because it is what is signified by the exterior word. For the exterior spoken sound signifies neither the intellect itself nor the intelligible species nor the act of the intellect, but it signifies the conception of the intellect, and through the mediation of the conception the sound refers to the thing. (Thomas Aquinas, *De potentia* 8.1)

h. It is further to be noted that the intellect, which has been informed by the species of the thing, forms within itself in an act of understanding a certain kind of intention of the thing understood; this is the reason of the thing that the definition signifies ... Since this understood intention is, as it were, a terminus of intellectual operation, it is distinct from the intelligible species that makes the intellect actual and must be seen as the principle of intellectual operation, even though both are a likeness of the thing understood. For because the intelligible species, which is a form of the intellect and the principle of understanding, is a likeness of the external thing, it follows that the intellect forms an intention which is similar to that thing, since just as a thing is, so are its works. And because the understood intention is similar to the thing in question, it follows that the intellect understands that thing when it forms an intention of this kind. (Thomas Aquinas, *Summa contra Gentiles* I.53.3–4)

Siger of Brabant puts forward the standard view of the thirteenth-century Aristotelians that human intellect is a power of understanding which needs an active component which brings it in contact with the intelligible aspects of things through the sensory soul (**a**). Understanding takes place through the abstracted ‘universal reasons of intelligible things’ (see also (51)). Thomas Aquinas describes this procedure in a more detailed way. The passive power of understanding things in the world requires an activator which is the intelligible form rendered actually intelligible by abstracting the intelligible species from phantasms (**b–c**). Aquinas writes that ‘there must be one principle which is the active power and makes the object actual and another principle which is moved by the object which is actual’ (*Summa theologiae* I.79.7). The active intellect ‘illuminates’ phantasms and ‘abstracts’ intelligible species from them. How this happens remains somewhat mysterious, but the result is that the intelligible form is present in the intellect and actualises it. The intellectual species is a likeness of the intelligible essence in things which is the object of understanding, the abstracted species being that by which the intellect understands (**d–e**). The abstracted species is in the intellect potentially, when the object is not yet actually understood, and it remains there as a habitual basis of further acts of understanding in which the agent intellect again turns to phantasms (**f**). See also I.79.6. For Aquinas’s view of turning to phantasm as a necessary concomitant of intellection, see p. 141 above. When a passive intellect is actualised, the intellect forms a concept or definition which is also called the understood intention or internal word (**g–h**). See also *Summa theologiae* I.85.2, ad 3; *Summa contra Gentiles* IV.11 and pp. 382–384 below. This is a pretty complicated metaphysical theory which is structured in accordance with Aristotle’s theory of active and passive powers and which aims to guarantee that the intelligibility which is embedded in things is objectively grasped in the act of understanding. That which is understood, the nature of things, is in the intellect, insofar as the intelligible species as a likeness is in intellect. The formal sameness of the activator in the intellect somehow guarantees that the act is about the corresponding nature.

5 Controversies Around the Intelligible Species

a. Therefore, my answer to the question is that it is necessary to posit in the intellect, insofar as it is memory, an intelligible species which represents the universal *qua* universal and is prior to the act of intellect as far as the order of nature is concerned. This answer is based on the arguments produced above, considering the object as universal and as present to the intellect; these features (namely, universality and presentness) precede the intellection as far as the order of nature is concerned. (John Duns Scotus, *Ordinatio* I.3.3.1, n. 370 (ed. Vat. 3, 225))

b. ... there is no path from the imperfect to the perfect except through the middle, particularly when there is great distance between these two. Because a phantasm is very imperfect when compared to intelligible being, it therefore seems that there is first formed a species in the intellect itself which is, as it were, of an intermediate nature. But it appears that this does not hold. On the contrary, one should say that nothing other than the intellection itself is formed in the possible intellect. For if a power has the ability to do something *per se*, then that thing will be produced *per se* by the proportionate agent in the power, and not by something else. Since the apprehensive power as such has, *per se* and alone, the ability for acts of cognising or cognition, nothing other than that is caused by the agent in the power in question *per se*. And so it seems that neither the sensible as such nor the intelligible as such causes in the sense or in the intellect anything other than the act *per se*. (Godfrey of Fontaines, *Quodlibet* IX.19 (273–274))

c. Furthermore, no species represents an object in the same way as the object itself represents itself. Therefore, when the attention of a faculty is presently directed to the object, it is not required that it is represented to the power by anything other than itself. Consequently, if something else is located between the attention of the power and its object, this would veil the thing, and impede (rather than help) its being attended to as present in itself. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 58 (II, 469))

d. ... I state briefly, for the time being, that the intelligible species of a material thing is something which is really distinct from an understanding of that thing. By ‘intelligible species’, I understand an abstract and spiritual form which is produced by the intellect and which represents the material thing in a virtual and abstract way. By ‘understanding’, I understand a cognition that the intellect has of the thing itself as presented to it by the species. For the time being, my main proof for this conclusion is as follows. If the intelligible species were really identical with the understanding, then that which is the immediate active principle of the intelligible species would be the immediate active principle of the understanding. This is manifest. The consequent is false, since the phantasm is the immediate active principle of the intelligible species, as practically everyone agrees. But this phantasm cannot in itself be the perfect immediate active principle of an understanding, as will be proved below. Therefore, etc. Further, it is easy to prove that the phantasm is the immediate active principle of the species. For the possible intellect is not the immediate principle of

the species, for it is in the potentiality of receiving the species ... neither can the active intellect be the adjacent principle for the species, for it is the virtual cause of all species and therefore it cannot be the immediate and adjacent cause for any one of them unless it is made determinate by some principle which is active and immediate, and what could this be other than the phantasm? Therefore, etc. (John of Jandun, *Questiones super libros De anima Aristotelis* III.14).

e. It appears that it must be said, in accordance with this, that the understanding of one and the same quiddity (for example, whiteness) requires two intelligible species, of which one is caused by the form of whiteness existing in the human imaginative power, whereas the other is caused by an act of the cogitative power, and the latter is more perfect than the former, since the cogitative power is nobler than the imaginative power. (John of Jandun, *Questiones super libros De anima Aristotelis* III.16)

f. The cognitive power must not only receive the species of the object, but also tend through its act toward the object. This second is more essential to the power since the first is required because of the imperfection of the power. And the object is the object because the power tends to it rather than because it impresses a species. (John Duns Scotus, *Quaestiones super libros Metaphysicorum Aristotelis* VII.14, 29)

g. The intellect is not merely changed by the real object, insofar as this real species is imprinted there; it is also changed by the object in an intentional way, insofar as the object shines in the species, and this second change is the reception of intellection, being from the intelligible as intelligible; and this change is understanding. (John Duns Scotus, *Ordinatio* I.3.3.1, n. 386 (ed. Vat. 3, 235))

The main lines of Aquinas's metaphysical psychology of intelligible species were accepted by many authors, including Scotus (**a**), even though he altered the emphasis; cf. (**f**) below. Godfrey of Fontaines, who often follows Aquinas, finds the notion of the intelligible species as an entity in the soul to be superfluous (**b**). Godfrey and some others were reluctant to accept the theory of abstracted species because it questioned the Augustinian thesis of a radical difference between intellect and phantasm. See Spruit 1994, 193–244. In this context Peter John Olivi used the notion of *aspectus*, actual attention, which refers to the intellect 'turning' to the intelligible object without any causal connection between the intellect and the sensory soul. They are related by a *colligantia* – the actuality of the lower power is accompanied by an act of the higher power (**c**). Like Siger of Brabant, John of Jandun had a high opinion of Averroes's commentaries, although he did not endorse the view of active and passive intellects as separate substances. Jandun argued that the notion of intelligible species can be applied to what Averroes calls intentions. The role of the agent intellect is to actualise the intellectual power, rather than abstract

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the species which is caused by the sensory soul when the intellect is actual. Jandun seems to assume that there are two intelligible species of which one is caused by a phantasm in imagination and the other by the act of sensory cogitative power (**d–e**). He apparently thought that these are needed for two aspects of concepts, one of which is related to content and the other to universality.

Scotus explains that when the abstracted species activates the intellect, the common nature as an object of cognition is displayed to the intellect through a second act. The common nature shines forth (*relucet*) through the intelligible species and is grasped as the content of the act of understanding. This content is said to have *intentional* or *objective* being (*Ordinatio* I.27.1–3, n. 54 (ed. Vat. 6, 86); *Ordinatio* IV.1.2, n. 3 (ed. Wadding 8, 56–57)). Universality as plural predicability belongs to the concept as a second intention, i.e. as a tool of intellect (*Ordinatio* II.3.1.1, n. 42 (ed. Vat. 7, 410)). Many authors have found this to be an innovative attempt to distinguish between something in the mind ‘subjectively’ (faculty, species, thought) and ‘objectively’ as the content of an act (King 2004a, 65–88; Perler 2002, 217–230; Pasnau 2003, 287–290). For **f**, see also p. 79 above.

6 William of Ockham on Concepts as Signs and as Acts of Understanding

a. The conceived term is an intention or passion of the soul naturally signifying or co-signifying something, fit to be a part of a mental proposition and fit for suppositing for the things in question. These conceived terms and the propositions composed of them are, therefore, those ‘mental words’ of which Blessed Augustine says, in Book XV of *De trinitate*, that they belong to no language because they remain within the mind and cannot be uttered externally, although spoken words are pronounced externally as signs subordinated to them. (William of Ockham, *Summa logicae* I.1 (OPh 1, 7))

b. The entity in the soul that is a sign of a thing, and that enters in the composition of a mental proposition in the same way as a spoken proposition is composed of spoken words, is sometimes called an ‘intention of the soul’, sometimes a ‘concept of the soul’, sometimes a ‘passion of the soul’, sometimes a ‘likeness of a thing’, and Boethius calls it an ‘understanding’ in his commentary on the *De interpretatione*. (William of Ockham, *Summa logicae* I.12 (OPh 1, 41))

c. But what is the entity in the soul that is such a sign? Let us remark that there are different opinions about this point. Some thinkers say that it is something which the soul has invented. Others say that it is a certain quality which exists subjectively in the soul and is distinct from the act of understanding. Still others say that it is the act of understanding. On the side of those who are for the latter view is the rule that ‘it

is useless to do by many means that which can be achieved by fewer'. Now, everything that can be preserved by positing some entity distinct from the act of understanding can be preserved without positing such a distinct entity, in that an act of understanding is suitable for suppositing for something and signifying something in just the same way as some other sign is. There is, therefore, no need to posit something else besides the act of understanding. (William of Ockham, *Summa logicae* I.12 (Oph 1, 42–43))

For William of Ockham, concepts are basic units of a mental language. As terms of a language, the concepts are signs, and they have the kind of semantic properties that signs have. The concepts are the same for all people, and the words of spoken languages are signs subordinated to them. Ockham takes his view of concepts to express what authors like Augustine and Boethius had meant (**a**, **b**). (For another translation of **a**, see p. 395 below.) Referring to his principle of parsimony, Ockham identifies the acts of understanding as concepts. Like Peter John Olivi before him, he found it superfluous to postulate either intelligible species preceding such acts or some end-products terminating them (**c**). See also Panaccio 2004 and pp. 394, 395, and 397 below.

Chapter 18

Concepts and Concept Formation in Early Modern Philosophy

Martina Reuter

The Renaissance witnessed a revival of ancient and Arabic philosophical traditions, such as Platonism, Skepticism and Averroism. Renaissance syncretism was especially influential at the universities in Northern Italy, where several scholars reinterpreted Medieval Latin conceptions of intelligible species. In the sixteenth and seventeenth century, university teaching in most European universities was dominated by second scholasticism. Francisco Suárez was the most philosophically inventive, as well as most influential, among these early modern scholastics (1).

New views were developed outside the universities by philosophers, who rejected the doctrine of intelligible species. They discussed what we call concepts in the terminology of *ideas*. In the seventeenth century the word *idea* had two different meanings. In the post-Augustinian philosophical and theological tradition, the term 'idea' was primarily used to indicate how all things exist in God, as ideas or archetypes in God's mind. These ideas were not images, because God did not possess a corporeal imagination. In the developing literary tradition, on the other hand, *idea* (as well as the French *idée*) refers to mental images or imaginings, often derived from sense. Seventeenth-century philosophers most often combined the two meanings of 'idea', and regarded 'ideas' as mental entities which in some way or other correspond to real existing things; see Ariew 1999. The question of the origin of ideas was essential. Views differed on whether ideas are innate, constructed by reason, or received through sense-perception. Despite the popular divide between rationalist propagators of innate ideas and empiricist propagators of sense perception, most philosophers took both sense and reason into account. Another central question concerned the ontological nature of ideas. Are ideas mere modifications of the mind, or do they also exist as mind-independent entities? Do universal ideas exist, or are ideas always particular? Are ideas primarily mental acts or objects? Towards the end

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of the seventeenth century empiricist philosophers introduced intensified discussions of the relationships between (sense) impressions and ideas, simple and complex ideas, primary and secondary qualities, and sensory and abstract ideas. During the eighteenth century many philosophers felt the need to distinguish between ideas, notions and concepts. The new terminology was related to a growing interest in the relation between language and cognition.

René Descartes explicitly denies that ideas can be identified with images because, like God, the human mind is essentially immaterial and cannot contain extended images (AT VII, 181). He separates ideas perceived by the senses, imagination and reason. All ideas are modes of thought and thus non-extended, but the two former categories of ideas depend on bodily functions (senses, brain) whereas ideas conceived by the pure understanding belong entirely to the immaterial mind. Only reason conceives the real natures of things, such as extension, geometrical forms and other general notions. Descartes emphasises that conceivability does not depend on imaginability. He uses the certainty of clear and distinct ideas as the main criteria for truth. Ideas conceived by reason are, according to Descartes, innate in the sense that the understanding has an innate capacity to generate them, but he emphasises that innate ideas are not distinct entities present in the mind (2). The Cambridge Platonists also claimed that innateness primarily consists of the mind's activity. Like Descartes, Ralph Cudworth claimed that the intelligible objects of knowledge are modifications of the mind, but following his strong Platonist influences Cudworth puts much more emphasis on how the intelligible order of the mind mirrors the true order of the universe (3).

The terminology of objective and formal being (*esse objective et formale*) constitutes a continuity between Scholastic and Early Modern views on the nature of concepts and ideas. Francisco Suárez and Eustachius a Sancto Paulo, professor at the Sorbonne, both use 'formal' and 'objective' in their descriptions of the relation between the act of conception and the object conceived. Using this terminology, Descartes claims that all ideas are equally extant in their *formal* reality as modifications of the mind, but ontologically graded on the basis of the *objective* reality possessed by their representational content (4).

Descartes's conception of the ontological nature of ideas gave rise to a famous dispute between Nicolas Malebranche and Antoine Arnauld. Malebranche criticises Descartes's claim that the intellect has an innate capacity or faculty to generate *true* ideas. He separates thoughts, understood as modifications of the mind, from ideas, which he, following Augustine, claims are conceived in God and constitute the blueprints according to which God created things. Arnauld, on the other hand, adopts Descartes's conception that ideas have objective being in the mind, and defends the claim that an idea as the content of a thought cannot be distinguished ontologically from an act of thought. He criticises Malebranche's introduction of ontologically distinct ideas as a mediating layer between perception and the thing perceived (5).

Descartes's views on the nature and origin of ideas were also criticised by materialists, such as Pierre Gassendi and Thomas Hobbes, who questioned the existence of an immaterial intellect and emphasised the role of sense-perception

and imagination in concept formation. In the fifth set of objections to Descartes's *Meditations on First Philosophy*, Gassendi emphasises that the two ideas of the sun distinguished by Descartes (the one based on sense-perception and the other on reason) are both ultimately derived from sense-perception (AT VII, 283–284). Furthermore, he argues that the mind must be extended in order to be able to receive ideas of extended things (AT VII, 331–332, 337–338). Likewise, in the third set of objections, Hobbes questions Descartes's claim that real natures are conceived by reason and claims that the nature of things is perceived by the senses and the imagination, while reason can only make inferences using these known natures, a view he further develops in his later writings. Arguing that all ideas are phantasms and have their origin in sense-perception, Hobbes claims that universals are only names given to groups of particulars.

In the context of British Empiricism, John Locke claims that all ideas are derived from experience. He holds what is basically a causal theory of representation. Locke separates simple and complex ideas, and his claim that simple ideas are real and adequate can be seen as developing the Epicurean claim that all sense impressions are true. Locke also separates primary qualities (which are in the things themselves) from secondary qualities (which are not), while also holding that ideas of secondary qualities are true in the sense that they are true effects of things. Problems related to Locke's realism were brought into focus by his treatment of the famous 'Molyneux' problem (cf. p. 104 above). Locke claims that general ideas are formed by abstraction. When abstracting, the mind may either pick out a common feature in many different things and thus create the general idea (of, for example, 'whiteness'), or it may drop out all particular features and thus create the general idea (of, for example, 'man'). Locke's empiricism did not go unchallenged. G.W. Leibniz wrote a critical commentary of Locke's main epistemological work, in which he argued that intellectual ideas are the only source of necessary truths (6).

Empiricism also raised the question of how the mind itself can be known. George Berkeley emphasised the active nature of the mind and claimed that the mind cannot be known by the same means as inert passive objects. He argued that we cannot have ideas of our mind and its acts, because ideas can represent only passive things. Berkeley makes a distinction between notions and ideas, and claims that we can have *notions*, but no ideas of the mind's activity. Étienne Bonnot de Condillac argued that the human capacity to conceive is profoundly dependent on a shared use of language. He emphasised that ideas and notions, as opposed to perceptions, are constructed by reflection. Reflection is dependent on the use of signs. Making and using signs is a capacity which develops only when humans live together in society. Condillac was among the first to make *conceiving* into an intrinsically social activity.

Christian Wolff contributed significantly to the consolidation of the term 'concept' (*Begriff*). He held that the soul has one unified faculty of knowledge which can produce confused representations called 'sensations' and clear and distinct representations called 'concepts'. Soon afterwards, Immanuel Kant developed his dual critique of (Lockean) empiricism and (Leibniz-Wolffian) rationalism. Kant argued that rationalists and empiricists share the assumption

that the soul has only one faculty of knowledge and representation. This simplified conception of cognition forces both rationalists and empiricists to reduce the profound difference between concepts and sensations, to a mere difference in degree of clarity and distinctness. Kant emphasised that, in order to understand cognition, one must distinguish the mental faculties of understanding (*Verstand*, lat. *intellectus*) and sensibility (*Sinnlichkeit*). He famously distinguishes between the logical form of a concept and its particular content, which is given in sensible intuition (7).

1 Ideas and Intelligible Species in Some Renaissance Authors

a. Master: The intellect is the potency of the soul by which everything is understood, and this is divided into the active and passive intellect, not by essence but by operation.

Student: What is the operation of the active intellect?

Master: It is fourfold. First is that by which it produces, together with phantasms, an intelligible species in the passive intellect; second is that by which it produces, through an intelligible species, an act of intellection; third is that by which it gives rise to a habitual disposition; and fourth is that by which it makes the habit perfect.

Student: Which are the operations of the passive intellect?

Master: These are the same in terms of receptive causality as those of the active intellect in terms of efficient causality, for the latter by nature makes everything and the former becomes everything, for the agent intellect makes all potentially understood things actually understood, and the passive intellect receives the intellections of everything. (Gregor Reisch, *Margarita philosophica* XI.3)

b. When the phantasy, which is aroused by the shape of a human derived from the sight, is formed by this human image, the formula of the species of human being, which was concealed in the secret parts of the mind, is incited to blaze, forming in act the acuity of mind or reason which it had formed in habit. This formation is a kind of ambiguous understanding or the beginning of understanding. But when it has been sufficiently formed, it is then formed by the idea of human being, that is, by the rational principle through which God generates human being. (Marsilio Ficino, *Theologica platonica* XII.2 (26))

c. In truth, Aristotle understands the universals through singulars, and the intellect becomes singular things in order to receive those notions which the Greeks call *noemata* and which could be called the species of intelligible things. Therefore the intellect becomes singular things, not literally, but intentionally, insofar as it receives the species of singulars through which it is, in a way, intentionally everything. (Nifo, *In De anima* III.8 (166vb))

d. For I do not assume that the quiddity which shines in the intelligible species is received like an accident in the possible intellect, but it merely has an

objective being there, like the known thing in that who knows; but I assume that the intelligible species itself is in the intellect in an informative way, like an accident in a subject. (Zimara, *Quaestio qua species intelligibiles ad mentem Averrois defenduntur* (Bvr))

e. First a singular is impressed in the mind, and from this an essential similitude is formed which is repeated in all things which have the same account. Grasping this similitude generates a universal concept immediately from the essential similitude, and in a mediated way from a thing. (Pomponazzi, *Quaestio de universalibus* (127))

f. Cajetan ... says that the agent intellect in some way acts with respect to a phantasm by illuminating it, not formally, but objectively ... therefore he says, to the second, that through this act the quiddity of a material thing appears in a phantasm, without individual conditions ... To the third, Cajetan adds that a phantasm which is illuminated in this way is made actually intelligible and produces an intelligible species in the possible intellect ... But all this is wrong ... The agent intellect never brings about an intelligible species unless it is determined by the cognition of the fantasy ... This determination does not arise from any efficacy of the phantasm itself but only because it provides matter and a kind of example to the agent intellect, by reason of the union which it has in the same soul ... It should be realised that the imagination and the intellect of human beings are rooted in the same soul and for this reason there is an order and consonance between their operations. (Suárez, *Commentaria una cum quaestionibus in libros Aristotelis De anima* 9.2.5–6, 11–12; *De anima* IV.2.4–5, 11–12)

A great number of various views were put forward in late fifteenth- and sixteenth-century discussions. These approaches were influenced by Medieval Latin and Arabic philosophy, and also by some new translations of late ancient works. Gregor Reisch's *Margarita philosophica* describes the concept formation by explaining influential Scholastic distinctions (a). In Ficino's Neoplatonic theory, the innate dispositions for concept formation are actualized as reactions to some actual imaginations and made perfect by the ideas (b). Many writers commented on the question of whether or not Averroes postulated intelligible species as mediators between the simple acts of the intellect and their objects. While Antonio Trombetta, Marcantonio Zimara and some others thought that he did, it was more common to deny this, as did Nicoletto Vernia, Alessandro Achillini, Agostino Nifo, and Pietro Pomponazzi, among others. These eclectic authors themselves interpreted the intelligible species in various ways. Nifo treated species in a way similar to Scotus as the content of a notion which is in the intellect intentionally and objectively (see p. 278 above), but unlike Scotus he gave up the subjective existence in

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the intellect (c). The medieval conception of the subjective being of the intelligible species in the intellect was defended by Zimara (d). In his eclectic approach, Pietro Pomponazzi also argued for the intelligible species as an immaterial accident generated by the agent intellect, but he also described this in terms of nominalist psychology (e). For these discussions, see Spruit 1995, 50–110. Cajetan, an influential figure of second scholasticism, tried to explain Aquinas's problematic idea that the agent intellect somehow illuminates the phantasms (*In primam partem Summae theologiae* (Vol. V, 266)). Suárez did not find this convincing because he did not accept any causal connections between mental faculties: rather, they co-operate through sympathetic determination (f). See Ludwig 1929.

2 Descartes on the Nature and Truth of Ideas

a. For I do not just call by the name 'idea' the images depicted in the imagination; on the contrary, I do not call them by that name, insofar as they are in the corporeal imagination. Instead, by the name 'idea' I call in general everything which is in our mind when we conceive something, independently of how we conceive it [...] It is the manner of conceiving them which makes the difference – whatever we conceive without an image is an idea of the pure mind, and whatever we conceive with an image is an idea of imagination. And as the limits of our imagination are very short and narrow, while our mind has hardly any limits, there are few things, even corporeal things, which we can imagine, although we can conceive them. We might perhaps think that the whole science is subject of our imagination, because it considers only sizes, shapes and movements, but it is in no way founded on phantasms of the imagination, but on the clear and distinct ideas of the mind. (Descartes, Letter to Mersenne, July 1641, AT III, 392–393, 395)

b. And even if this is proved by no reason, it is impressed on the minds of all of us that whenever we perceive something clearly, we spontaneously assent to it and cannot doubt its truth in any way. (Descartes, *Principia philosophiae* I.43, AT VIIIA, 21)

c. I have never written or thought that the mind requires innate ideas which would be distinct from its faculty of thinking. I find in me, however, certain thoughts which neither come from external objects nor from the determination of my will, but solely from the faculty of thinking in me. In order to distinguish the ideas or notions, which are the forms of these thoughts, from adventitious and factitious ones, I called these innate. (Descartes, *Notae in programma quoddam*, AT VIIIB, 366)

Descartes takes an ambivalent position on the cognitive role of the imagination. In his mature works he emphasises that the understanding is able to conceive the true nature of all things, including extended bodies, independently of the imagination. Descartes's work in analytical geometry made geometrical drawings superfluous, at least in principle, and allowed him to claim that the true nature of geometrical figures is conceived by the understanding, not the imagination (**a**); see also *Meditationes* VI (AT VII, 72). Descartes claims that clear and distinct ideas are true and that the human mind is constituted in such a way that it cannot doubt what it clearly and distinctly perceives to be true (**b**); see also *Meditationes* III (AT VII, 35). When discussing clear and distinct ideas, Descartes uses 'idea', 'perception' and occasionally 'notion' interchangeably (**c**). The impossibility to doubt clear and distinct ideas provides the basis for his *cogito ergo sum* –argument, where the argument is conceived to be true because it cannot be doubted, see *Discours de la method* IV (AT VI, 32). Descartes's claim that innate ideas must be understood as an innate faculty of summoning up ideas is based on his ambiguous use of the term 'idea'. He uses 'idea' to indicate thought-acts as well as the content or object of these thought-acts, see *Meditationes* (AT VII, 8). Innate ideas are claimed to be an innate capacity of certain thought-acts, not a separate content of these acts. It is unclear exactly what Descartes means by 'forms of thought' (**c**). He needs these innate forms of thought in order to distinguish our ideas of God or a triangle, which are innate, from adventitious or made up ideas, such as unicorns. He seems to use 'form' in more or less the same way that his contemporary Scholastic thinkers used 'formal concept' (**4a, b**), despite the fact that this usage contradicts his critique of intelligible forms. The ambiguity of this passage contributed to Malebranche's critique of Descartes's doctrine (**5c**).

3 Platonist Views on Innateness and Intelligible Structure

a. [K]nowledge is not a passion from anything without the mind, but an active exertion of the inward strength, vigour, and power of the mind, displaying itself from within, and the intelligible forms by which things are understood or known are not stamps or impressions passively printed upon the soul from without, but ideas vitally protended or actively exerted from within itself.

[...] when foreign, strange, and adventitious forms are exhibited to the mind by sense, the soul cannot otherwise know or understand them, but by something domestic of its own, some active anticipation or prolepsis within itself, that occasionally reviving and meeting with it, makes it know it or take acquaintance with it. And this is the only true and allowable sense of that old assertion, that knowledge is reminiscence, not that it is the remembrance of something which the soul had some time before actually known in a pre-existent state, but because it is the mind's

comprehending of things by some inward anticipations of its own, something native and domestic to it, or something actively exerted from within itself. (Cudworth, *A Treatise Concerning Eternal and Immutable Morality* (73–74))

b. The mind being a kind of notional or representative world, as it were a diaphanous and crystalline sphere, in which the ideas and images of all things existing in the real universe may be reflected or represented. (Cudworth, *A Treatise Concerning Eternal and Immutable Morality* (77))

c. In short. As bodily sight discovers to us *visible* objects; so does the understanding, (the eye of the mind, and infinitely more penetrating) discover to us *intelligible* objects; and thus, in a like sense with bodily vision, becomes the inlet of new ideas. (Richard Price, *A Review of the Principal Questions in Morals*, third edition (51–52))

d. Education and habit can give us no new ideas. The power they have supposes somewhat natural as their foundation. Were it not for the natural powers by which we perceive pleasure and pain, good and evil, beauty and deformity, the ideas of them could never be excited in us, any more than the ideas of colour in persons born blind; ... – Were there no ideas of proportion, similitude, existence, identity, &c. essential to our understanding, we should lose all capacity of knowledge and judgment, [...] (Richard Price, *A Review of the Principal Questions in Morals*, third edition (291)).

Cudworth combines Platonism with the use of Stoic concepts. He integrates the concept of *prolepsis* into his interpretation of the doctrine of *anamnesis* (**a**) and uses the concept of common notions (*koinai ennoiai*) in his description of the mind's innate principles of knowledge. For a discussion of Cudworth's Stoic influences, see Hutton 1996. There is a tension between Cudworth's emphasis on the activity of the mind (**a**) and his metaphor of the mind mirroring the universe (**b**). He has to continually remind his reader that the 'mirroring' he refers to is not a passive reception, but requires activity of the mind, otherwise 'no reason could be given at all why a mirror or looking-glass should not understand' (*Treatise*, 75). Cudworth also attempts to reconcile Aristotle and Platonism (e.g. *Treatise*, 77), but his view on concept formation is significantly different from the Aristotelian view in its emphasis 'that knowledge doth not begin in individuals, but ends in them' (*Treatise*, 114). Universal concepts are not derived from the perception of individuals, but rather we are able to perceive individuals by our innately derived universal concepts. Cambridge Platonism remained an influence in British philosophy well into the eighteenth century. The mathematician and moral realist Richard Price was the most explicit late defender of the Platonist view that the understanding has an innate capacity to acquire universal concepts, including mathematical and moral concepts. He attempted to combine Cudworth's Platonism with the empiricist challenge introduced by John Locke (**c**, **d**).

4 Early Modern Conceptions of Formal and Objective Being

a. For example, when we conceive of a human being, the act which we bring about in the mind in order to conceive of the human being is called ‘formal concept’, but the human being which is known and represented by that act is called ‘objective concept’. It is conceived through an extrinsic denomination on the basis of the formal concept, through which it is said to be conceived; therefore it is rightly called ‘objective’, for it is not conceived as a form which intrinsically determines a conception, but as an object and matter to which the formal concept is directed and to which the mind’s eye directly tends. Therefore it is called by some, following Averroes, ‘intellected intention’ and by others ‘objective reason’. (Suárez, *Disputationes metaphysicae* II.1.1)

b. Any given thing is found to have a double concept, one formal and another objective. The former is a proper concept, the latter is called a concept only in an analogical or denominative sense, for it is not a genuine concept, but rather a thing which is conceived, or the object of conception. But a formal concept is the actual likeness of a thing which is understood by the intellect and produced to imprint it; for example, when the intellect perceives human nature, the actual likeness which it imprints of the human nature is the formal concept of the understood nature. It is called an actual likeness to distinguish it from the intelligible species, which is the habitual image of the same thing. You may understand from this that the formal concept is the expressed species of the thing understood, or a word of the mind. The objective concept, which is also called ‘formal reason’, is the thing which is represented to the intellect by means of the formal concept. Thus in the above example, human nature, which is actually known, is called ‘objective concept’. (Eustache de Saint-Paul, *Quarta pars summae philosophicae* 1.1.2)

c. The nature of an idea is such that of itself it requires no formal reality except what it derives from my thought of which it is a mode. But that an idea contains this objective reality and not another must surely derive from some cause which contains at least as much formal reality as it contains objective reality. [...] I must not assume that because the reality which I consider in my ideas is merely objective, the same reality need not exist formally in the causes of these ideas, but it is enough that it is present in them as well objectively. For as this objective mode of being belongs to ideas by their nature, so the formal mode of being belongs to the causes of ideas, at least to the first and most important ones, by their nature. And although one idea may give birth to another idea, there is no infinite regress here, but one must reach a first idea, the cause of which is like an archetype which contains formally and in fact the whole reality or perfection which is only objectively or by representation in the idea. (Descartes, *Meditationes de prima philosophia* III, AT VII, 41–42)

d. The idea of the sun is the sun itself existing in the intellect, not indeed formally, as it does in the heavens, but objectively, that is in the way in which objects are wont to be in the intellect. This way of being is of course much less perfect than that of things which exist outside the intellect, but as I explained, it is not therefore simply nothing. (Descartes, First Set of Replies, *Meditationes de prima philosophia*, AT VII, 102–103)

There are many similarities between Suárez's and Eustache's presentations (a, b). They both held that the objective concept is a concept only in an analogical (Eustache) or denominated (Suárez) sense. The word 'concept' (*conceptus*) used here derives from the verb 'to conceive' (*concipere*), and the formal concept was generally understood as an act of the mind. The formal concept is the act of representation and the objective concept is the thing as it is represented. Both interpretations held that there are three separable instances: the external thing (which does not need to exist, but has to be potentially imaginable, such as a unicorn), the formal concept (act of mind) and the objective concept (thing thought of). They also agreed that there is a real distinction between the external thing and the formal concept. But there was disagreement over how the objective concept is related to the formal concept. The Scotist introduction of the objective concept as a 'third thing' (*tertium quid*) situated between the external thing and the formal concept (mental act) opened the door to the so-called 'veil of ideas' problem, that is, the question of whether we perceive external objects or merely internal ideas. This problem did not develop, though, as long as Scholastic philosophers, Thomists and Scotists alike, agreed that there is a real correspondence between the form of the formal concept and the form of the external thing. For detailed discussions of Scholastic influences on Early Modern conceptions of ideas, see Ayers 1998; Ariew 1999; Pessin 2007.

When Descartes uses 'idea' to signify the content of a thought-act, he claims that this idea exists in the mind by its 'objective reality'. In the same context he uses 'formal reality' to name a causally prior and more perfect mode of existence, which causes objective existence in the mind. But Descartes also claims that the formal reality (i.e. the most perfect mode of being) of an idea understood as a thought-act is a modification of the mind. Thus, when Descartes conceives ideas as thoughts, they all have the same formal reality as modifications of the mind; but when he conceives ideas as the contents of thoughts, they have a degree of objective reality which depends on the formal reality of the thing represented by the thought (c). From the latter perspective, our idea of God, who is an infinite and perfect being, has a higher degree of objective reality than our idea of the sweet taste of an apple, which is a mere sense-perception, without any formal reality in the apple. Descartes's use of 'formal being' is related to Suárez' and Eustache's use of 'formal concept'. They claimed that the objective concept is caused by the formal concept, which is the form of the conceived thing as it is actualized in thought. Descartes rejects the claim that there are formal concepts understood as intelligible species actualized in the mind. He modifies the process of causation by excluding the transition of any form or species, while still claiming that objective being is caused by formal being. Descartes's terminology is further confused by the fact that he occasionally uses 'material' instead of 'formal' as the counterpart of 'objective', see *Meditationes* (AT VII, 8).

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There has been much discussion about whether Descartes invents a ‘veil of ideas’, which isolates the thinker from external reality. The crucial question is how strong the distinctions are which Descartes posits between a) the operation of the intellect, b) the thing as it is thought of (objective idea), and c) the formally existing thing. If there is a mere conceptual distinction between a) and b), and a real distinction between b) and c), then there seems to be a veil between the thing as it is thought of and the thing as it exists independently of the mind. On the other hand, if there is a real distinction between a) and b), and a mere conceptual distinction between b) and c), i.e. if the thing thought of is *really* the independently existing thing, then Descartes seems to defend a ‘direct cognition’ model. This latter interpretation is strengthened by Descartes’s claim that the objective idea of the sun is ‘the sun itself existing in the intellect’. The ‘veil of ideas’ interpretation has been defended by Ayers 1998 and the ‘direct cognition’ interpretation by Pessin 2007. See also Ariew 1999; Alanen 2003; Brown 2007b.

5 Critical Modifications of Descartes’s Conception of Ideas

a. I think that everyone grants that we do not perceive the objects outside of us by themselves. We see the sun, the stars, and an infinity of objects outside of us, and it is not likely that the soul leaves the body and, as it were, takes a walk through the heavens to contemplate all those objects. Therefore, it does not see them by themselves, and the immediate object of the mind when it sees the sun, for example, is not the sun, but something which is intimately united to the soul, and this is what I call an idea. (Malebranche, *De la recherche de la vérité* III.2.1)

b. It seems me very useful to consider the fact that the mind knows objects in two ways only: by illumination and by sensation. It sees things through illumination when it has a clear idea of them, and when by consulting this idea it can discover all the properties which these things can have. It sees things by sensation when it finds in itself no clear idea of these things to be consulted. (Malebranche, *De la recherche de la vérité*, Eclairissement X)

c. There is a big difference between being movable and moving oneself. Matter is by its nature movable and capable of figure; it cannot even subsist without figure. But it does not move itself, it does not shape itself and it lacks a faculty to do so. I agree that the mind is by its nature capable of movement and ideas. But it does not move itself and it does not enlighten itself. It is God who works everything physical in minds as well as in bodies. (Malebranche, *De la recherche de la vérité*, Eclairissement X)

d. (5) I say that a thing is objectively in my mind when I conceive it. When I conceive the sun, a square, or a sound, then the sun, the square, or the sound are objectively in my mind, whether or not they exist outside my mind.

(6) I have said that I take the perception and the idea to be the same thing. It should be noted, however, that while this thing is single, it has two relations: to the soul which it modifies and to the thing perceived, in so far as the latter exists objectively in the soul, and that the word 'perception' more directly refers to the former relation and the word 'idea' to the latter. Thus the perception of a square has as its more direct meaning my soul perceiving the square, whereas the idea of a square has as its more direct meaning the square in so far as it is objectively in my mind. (Arnauld, *Des vraies et des fausses idées* 5, def. 6)

e. I call the comprehension of an idea the attributes which it contains in itself and which cannot be removed without destroying the idea. Thus the comprehension of the idea of a triangle includes extension, figure, three lines, three angles, the equality of these three angles to two right angles, and so on. I call the extension of an idea the subjects to which it applies. (Arnauld and Nicole, *La logique, ou l'art de penser* I.5)

Malebranche adopted Descartes's mechanistic conception of matter and his definition of clear and distinct ideas (**b**). But Malebranche is unsatisfied with Descartes's account of causation of ideas and emphasises that the ultimate author of our ideas (God) must himself be the true cause of particular ideas (**c**). From Malebranche's perspective, Descartes's claim that the mind by its nature has a capacity to produce ideas would mean that the mind is able to give itself its own essence of thinking: the mind would be a faculty of self-creation. This Malebranche considers ontologically impossible. He claims that ideas have to be represented to the mind by a power separate from the mind's capacity for thinking. In order to be able to affect the mind and make ideas actually present, this power (God) has to be as immaterial as the mind. Malebranche questions Descartes's tendency to identify thoughts and ideas, and claims that ideas, originally understood as archetypes in God's mind, would lose their reality if they were understood to be mental entities. Formal concepts must not be identified with mental modifications. According to Malebranche, Descartes's claim that ideas have objective reality constitutes an insufficient ontological account. For Malebranche's argument, see Pécharman 2008.

Arnauld criticises Malebranche's conception of ideas as mediating objects (**a**) and argues, following Descartes, that ideas are not pre-requisites for perceiving or conceiving objects, but constituted by the actual act of perceiving or conceiving (**d**). He emphasises that when one speaks of the *presence* of a perceived object, it is essential to understand the difference between *objective* and *spatial* presence. He claims that Malebranche confuses *objective* and *spatial* presence, which causes him to postulate ideas understood as representations separable from the act of thinking, knowing or perceiving. In a truly Cartesian spirit Arnauld emphasises that this confusion is based on a confusion between mental conceiving and bodily seeing, which is derived from our

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childhood tendency to understand *conceiving*, metaphorically, as seeing. Many early modern philosophers used the (originally Platonist) metaphor of seeing in order to describe intellectual intuition. The description of true ideas as ‘clear and distinct’ in itself implies that ideas are ‘seen’. The revitalization of the view that conceiving is intrinsically like seeing is perhaps connected to the fact that the importance of medieval theories of mental language faded during the seventeenth century. Whereas the idea of a mental language describes understanding as intrinsically discursive, intellectual intuition represents understanding as direct and non-discursive.

Arnauld’s interest in ideas originates in his early work, written together with Pierre Nicole and known as the Port-Royal logic. Here Arnauld and Nicole define the comprehension (i.e. conceptual content) and extension of an idea (e). Apparently Arnauld himself did not interpret the ‘comprehension’ as the content of any particular mental act: it is necessary and not dependent on particular instances, though it can be known more or less distinctly. In his objections to Descartes’s *Meditationes*, Arnauld criticises Descartes’s assumption that one knows the full logical content even of one’s clear and distinct ideas (AT VII, 201–202). The Port Royal definition of comprehension and extension influenced many eighteenth-century logicians, who focused on the content of specific mental acts and interpreted the relation psychologically.

6 The Debate on Sensuous vs. Intellectual Ideas

a. A triangle in the mind arises from a triangle we have seen, or else it is constructed out of things we have seen. (Thomas Hobbes, Third Set of Objections with Replies, *Meditationes de prima philosophia*, AT VII, 193.)

b. IMAGINATION therefore is nothing else but *sense decaying*, of *weakened*, by the absence of the object. (Hobbes, *Concerning Body* IV.4.7; *De corpore* IV.25.7)

c. This universality of one name to many things, hath been the cause that men think that the things themselves are universal. And do seriously contend, that besides Peter and John, and all the rest of the men that are, have been, or shall be in the world, there is yet somewhat else that we call man, (viz.) man in general, deceiving themselves by taking the universal, or general appellation, for the thing it signifieth. (Hobbes, *The Elements of Law Natural and Politic* I.5.6)

d. The Understanding seems to me, not to have the least glimmering of any Ideas, which it doth not receive from one of these two. External Objects furnish the Mind with the Ideas of sensible qualities, which are all those different perceptions they produce in us: And the Mind furnishes the Understanding with Ideas of its own Operations. (Locke, *An Essay concerning Human Understanding* II.1.5)

e. [...] I think we may say the sorting of [all things produced by nature] under names is the workmanship of the understanding, taking occasion from the similitude it observes amongst them to make abstract general ideas, and set them up in the mind, with names annexed to them as patterns or forms (for in that sense the word form has a very proper signification) to which as particular things existing are found to agree, so they come to be of that species, have that denomination, or are put into that classis. (Locke, *An Essay concerning Human Understanding Essay III.3.13*)

f. Philaethes: But truths are subsequent to the ideas from which they arise, are they not? And all ideas come from the senses.

Theophilus: Intellectual ideas, from which necessary truths arise, do not come from the senses; and you admit that some ideas are due to the mind's reflection upon itself. Now, it is true that explicit knowledge of truths is temporally or naturally subsequent to the explicit knowledge of ideas; as the nature of truths depends upon the nature of ideas, before one or the other is explicitly formed, and truths involving ideas which come from the senses are themselves dependent on the senses, at least in part. But the ideas which come from the senses are confused; and so too are the truths which depend on them, at least in part, whereas intellectual ideas, and the truths dependent upon them, are distinct, and neither the ideas nor the truths have their origin in the senses; though it is true that without the senses we would never think of them. (Leibniz, *Nouveaux essais sur l'entendement humain I.1.11*)

Hobbes's attempt to develop a materialist understanding of knowledge led him to give sense and the imagination a central role in concept formation. He conceives of the imagination as a capacity to reproduce perceived objects (a, b). Hobbes was also a radical nominalist, who denied the real existence of universal concepts such as 'man' (c). Like Hobbes, Locke criticised the Aristotelian assumption that there exist natural kinds or species of things (e). Locke argues that our classificatory activity is based on choosing similarities from among innumerable many similarities and dissimilarities that are found among particular things. Our use of general terms in order to group particulars into kinds is based on existing similarities, and thus not completely arbitrary, but the grouping is a human classificatory activity and not based on ready-made natural kinds. For further details, see Chappell 1994 and Guyer 1994. Leibniz questions Locke's claim (d) that all ideas are derived either from sense-perception or from perceptions of the mind's own operations. Leibniz's commentary on Locke's position consists in a dialogue between Philaethes, who follows Locke and believes in the senses as the sole source of all knowledge, and Theophilus, who presents Leibniz's own position (f). Leibniz claims that intellectual ideas and truths do not originate in the senses, even though the senses do participate by activating our attention and making us think of these ideas.

7 Ideas, Notions and Concepts

a. After what has been said, it is, I suppose, plain that our souls are not to be known in the same manner as senseless, inactive bodies, or by way of *idea*. *Spirits* and *ideas* are things so wholly different, that when we say ‘they exist,’ ‘they are known,’ or the like, these words must not be thought to signify anything common to both natures ...

We may not, I think, strictly be said to have an *idea* of an active being, or of an action; although we may be said to have a *notion* of them. I have some knowledge or notion of *my mind*, and its acts about ideas; inasmuch as I know or understand what is meant by these words ... It is also to be remarked that, all *relations* including an act of the mind, we cannot so properly be said to have an idea, but rather a notion, of the relations and habitudes between things. (Berkeley, *A Treatise Concerning the Principles of Human Knowledge*, second edition, I.142)

b. We may observe two essential differences between simple and complex ideas. The mind is wholly passive in the production of the former; it cannot form an idea of a colour it has never seen, but it is active in the production of the latter. It unites simple ideas from some pattern or by its own choice; in a word, they are the product of experience and reflection. More precisely, I call them ‘notions’ ... I have still one remark to make on the words ‘idea’ and ‘notion’. It is that as the former signifies a perception considered as an image and the latter an idea which the mind itself has made, ideas and notions can only be had by beings capable of reflection. Others, such as brutes, only have sensations and perceptions. What for them is only a perception becomes an idea for us by our reflection that this perception represents something. (Condillac, *Essai sur l’origine des connoissances humaines* I.3.13, 16)

c. There can be no doubt that if someone wanted to calculate for himself, he would be obliged to invent signs as if he wanted to communicate his calculations. But why would that which is true in arithmetic not be the same in the other sciences? Would we ever be able to reflect in metaphysics and morals if we had not invented signs to fix our ideas all along as we formed new combinations? Should not words be to the ideas in all the sciences what numerals are to the ideas in arithmetic? It is likely that the ignorance of this truth is one of the causes of the confusion which prevails in works on metaphysics and morality. (Condillac, *Essai sur l’origine des connoissances humaines* I.4.1.5)

d. When we have clear thoughts or concepts about a thing, we understand it, and what we can clearly know is understandable. In everyday life, it is common to say that a thing is understood when one has a clear concept about it – only in sciences is it required that the mere knowledge of a thing is distinguished from understanding it. (Christian Wolff, *Vernüfftige Gedancken von Gott, der Welt und der Seele des Menschen* 3, § 276)

e. Leibniz did not regard as original the conditions of sensible intuition, which bring with them their own distinctions, for sensibility was for him only a confused kind of

representation, not a special source of representations; [...] In a word, Leibniz made the appearances intellectual, just as Locke made the concepts of understanding totally sensitive [...], that is, interpreted them as nothing but empirical or abstracted concepts of reflection. Instead of seeking two quite different sources of representation in the understanding and the sensibility, which could judge about things objectively and validity only in conjunction, each of these great men holds on only to that of the two, which in his opinion is immediately related to things in themselves, while the other only confuse or order the representations of the first. (Immanuel Kant, *Kritik der reinen Vernunft*, A 270–271)

Berkeley claims that ideas are representative images, which are by their nature intrinsically passive and inert (see *Treatise* I.25, 27). Since these representative images are passive, they cannot represent the activity of the mind (a). Notions, on the other hand, are a kind of non-representative knowledge, by which we understand the meaning of entities such as ‘spirit’ or ‘mind’, which cannot be captured by ideas (see *Treatise* I.89). In this passage, Berkeley defines meaning with reference to language, and claims that to have a notion of spirit means that ‘we understand the meaning of the word, otherwise we could not affirm or deny anything of it’ (*Treatise* 140). It is important to note also that the relations between ideas are such that, strictly speaking, we can have only notions of them, but not ideas. This is because they are made by the active mind.

Like Berkeley, Condillac connects ‘notions’ to the activity of the mind, and more specifically to the mind’s capacity to construct complex ideas (b). Condillac was familiar with Berkeley’s philosophy and refers especially to his theory of vision (see Condillac, *Essai* I.6.6, 8, 12, 14). In contrast to Berkeley, Condillac does not consider ideas to be entirely passive representations. The constitution of an idea requires an act of reflection by which the mind considers a perception as an image (*Essai* I.4.2. 25; cf. I.3.16). According to Condillac, reflection is intrinsically dependent on the use of signs, a capacity only humans have (c). He emphasizes that signs are needed in order to think, and not just to express thoughts; he furthermore criticises Locke, Descartes and Malebranche for having failed to understand the profound significance of the spoken and written word, and for considering language as an obstacle to, rather than necessary condition for, thought (*Essai* I.4.2. 27).

The making of signs is, according to Condillac, dependent on humans living together. Humans learn to make and use signs only through interaction with each other, but when they master this basic skill they can also acquire new ideas and make new signs in solitude (*Essai* I.4.2. 25). Condillac refers to Christian Wolff as an example of a philosopher who considered the necessity of instituted signs. Condillac describes the impaired spiritual and intellectual abilities of two boys deprived of the use of language (one deaf-mute

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from birth and one raised by bears) by using cases also cited in Wolff's *Psychologia rationalis methodo scientifico pertractata* § 461. But Condillac criticizes Wolff for overlooking the absolute necessity of signs and for being unable to comprehend how signs contribute to the operations of the mind (*Essai* I.4.2.27).

Wolff calls distinct representations achieved through reflection 'concepts'. These concepts constitute general knowledge as opposed to mere knowledge of particular things (**d**). According to Wolff there are two ways of knowing the truth: experience, originating in the senses, and reason, originating in the distinct concepts of the understanding (*Vernünfftige Gedancken von Gott* 3 §372). Still, the distinction between these two ways of knowing is not absolute. Wolff accepts Leibniz's view that humans have innate dispositions to conceive, but he also holds that there are no specific concepts in the intellect that were not first given by the senses. Reason has to work with concepts abstracted from the senses, see Beck 1969. Wolff's attempt to save Leibniz's model and attribute sensation and reason to one unified mental faculty prompted Kant to formulate his twofold critique of both the rationalist intellectualization of appearances and the empiricist sensitivization of concepts (**e**).

Part VII
Judgement and Reasoning

Chapter 19

Ancient Theories of Judgement

Mika Perälä

The Greek term *logos* stands for a statement which is expressed in a language, but it also refers to a corresponding judgement or belief (*doxa*, *hypolēpsis*) in one's soul when one makes such a statement. The connexion between statements and judgements is arguably close, and some of the problems which arose in connection with statements were also relevant to judgement. A major problem discussed by early Greek thinkers concerned the nature and possibility of false statements: what, if anything, is making a false statement? Parmenides and Protagoras argued that this is not possible: if one states something, one states something that is and, thereby, something that is true. Plato's denial of this position resulted in a new understanding of the bearers of truth and falsity. He admitted in the *Sophist* that each word refers to something, but insisted that only statements can be true or false. This provided the basis for Aristotle's account of assertion and denial which arise from conjoining and separating the objects of thought. In this line of argument, judgement constitutes a thought with a composite content, and it is to be distinguished from a thought about a simple object. Aristotle referred to both types of thought as the acts of the intellect or understanding (*noēsis*, *nous*), and said that falsehood is not possible with respect to simple objects (1).

Both Plato and Aristotle maintained that some judgements are concerned with what appears to be case, but they had rather different ideas of the relationship between judgement and appearance. While Plato identified in the *Sophist* one type of judgement, i.e. perceptual belief, with appearance, Aristotle argued that appearance is independent of belief (2).

The idea of judgement as an act of composition or separation did not play a part in Hellenistic philosophy. Both the Epicureans and the Stoics thought that our perceptions and thoughts, referred to as appearances (*phantasiai*), have complex

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contents right from the start. What was characteristic of their view was a clear distinction between appearance and assent, for example, Cleon's appearing to be white, and our assenting to his being white. This distinction was also crucial for the Sceptics, and it was well known to the late ancient commentators.

Epicurus argued that all appearances are true, but when we add a belief to them, we may fail. The Stoics did not accept the truth of all appearances, and they examined the relations between appearance and assent (*sunkatathesis*) in greater detail. In assenting to an appearance, we assent, strictly speaking, to a subsisting complete 'sayable', which determines the propositional content of a rational appearance. The distinction between complete sayables and rational appearances suggests that the Stoics distinguished between an abstract proposition and an act of thought.

The Pyrrhonian Sceptics advocated suspension of judgement (*epokhē*) in their investigations. This meant that in uttering phrases such as 'I feel cold' or 'This is a book,' they said only what was apparent to themselves and reported their own appearances without affirming or denying anything about external objects. Some critics asked whether Pyrrhonists can consistently conduct sceptical enquiry without apprehending the objects under study. Sextus Empiricus claimed this to be possible because, according to him, a Pyrrhonist is entitled to adopt a weaker type of epistemic attitude, which involves assent to appearances insofar as they appear to him (3).

Late ancient philosophers elaborated on Plato's and Aristotle's theories. Plotinus, for example, assumed that discursive reason (*dianoia*) has three basic functions: (re)cognition, conjoining and separating, and reasoning. In Plotinus' view, some cases of recognition can be explained with the help of memory (for example, identifying a man as Socrates), while others, such as judging a man to be good, require the use of forms which originate from within. In Plotinus' view, a major difference between discursive reason and intellect was that while the discursive reason was concerned with divided objects, the intellect contemplated a single unity. As Plotinus put it, the intellect's thought has no parts. This did not imply that the intellect would consider only one homogenous object. By contrast, it apprehends, according to Plotinus, 'all together' or 'all at once' (4).

1 Predication, Composition, and Division in Plato and Aristotle

a. ... 'walks runs sleeps'... Even if someone said all of them one after another, this would not result in any statement... Again, if one said 'lion stag horse'... no statement would arise from this sequence. For the sounds uttered in the latter or the former way would indicate neither an action nor non-action nor the being of what is nor of what is not unless one combines the verbs with the nouns. (Plato, *Sophist* 262b5–c5)

b. False statement seems indeed really and truly to arise from the kind of combination of verbs and names which states something about you, yet states that which is different as being the same or that which is not as being that which is (Plato, *Sophist* 263d1–4).

c. The understanding of undivided objects is among those things about which there is no falsity. However, in cases where there is both falsity and truth, there is already a combination of what is thought, like a unity of existing things. Just as Empedocles said ‘in many cases heads grew without necks’ and then were conjoined by love, so also these things that are separate are combined, for example the incommensurable and the diagonal. And again, if understanding is concerned with the past or future, time is also taken into account and combined. For falsity always involves a combination. And if one states that white is non-white one combines white and non-white. On the other hand, it is possible to state that all the aforementioned examples are divisions. However, it is not only that Cleon is white that is false or true but also that he was or will be. And that which generates the unity in each case is the intellect. (Aristotle, *De anima* III.6, 430a26–b6)

d. If a person thinks of each of the halves [of a line] separately, then he also divides the time, and then it is as if they were lengths themselves. However, if he thinks of the whole as consisting of halves, then he does so in a time consisting of both halves (Aristotle, *De anima* III.6, 430b11–14)

e. Every assertion states something of something, as does denial, and is true or false. However, not all understanding is such, for example, understanding of what an object is with respect to ‘what it is to be what it was’ is true, and does not state something of something. (Aristotle, *De anima* III.6, 430b26–29)

f. ... [with regard to composites] the one who thinks the separated to be separated and the combined to be combined has the truth, while the one who has it against the facts is in error... [With regard to incomposites] touching [the incomposite] and saying it are true (for assertion and saying are not the same), while not to touch is to be ignorant. For it is not possible to be deceived regarding what an object is, except accidentally; and similarly in the case of incomposite substances. (Aristotle, *Metaphysics* IX.10, 1051b3–6; 24–27)

It is claimed that Plato resolved the problem of false statement once and for all in the *Sophist*; for his earlier considerations about this problem, see *Euthydemus* 283e–284c, *Cratylus* 385b–c and especially *Theaetetus* 187d–201c. The problem, as it is discussed in the *Sophist*, can be stated in the form of argument thus: supposing that to speak falsely is to say what is not, and that it is impossible to say what is not, it follows that it is impossible to speak falsely (Crivelli 2012, 2). Plato’s solution was to give a new interpretation of saying what is not. First, he pointed out that an affirmative statement consists of a name and a verb which are combined (**a**). Respectively, a negative statement consists of a name and verb which are ‘divided’ by a negation. Then, he defined true and false statements thus: a true statement ‘states those which are as they are’ (*Sophist* 263b4), while the false one ‘states something

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which is different from those which are' (263b7). Thus understood, making a false statement, or saying what is not, consists in saying about something what is not about it to be **(b)**. These results concerning linguistic statements can be transferred to judgements understood as mental states (see **2a**). For extensive discussion, see Crivelli 2012; other informative studies include Nuchelmans 1973; Denyer 1991; Frede 1992b; Brown 2008; Crivelli 2008.

Following Plato, Aristotle held that true and false judgements require combining and dividing **(c)**. In logical terms, an act of judgement can be understood as a predication: stating something of something, or more precisely, regarding *A*, stating that it is *B* **(e)**; see also *De Interpretatione* 5, 17a20–22; *Prior Analytics* I.1, 24a16–17). The standard interpretation is that the items to be combined or divided are themselves undivided and simple (i.e. individuals or universals) (*Metaphysics* VI.4, 1027b29–34; IX.10, 1051b9–17; see e.g. Bäck 2000, 83). However, an alternative interpretation claims that the intellect does not strictly speaking combine or divide simple items. Rather, the intellect thinks of a combined (divided) item that it is combined (divided). According to this interpretation, that which is combined or divided is to be understood as a state of affair; see Crivelli 2004, 49–71. There is evidence for either interpretation. In saying 'if one states that white is non-white one combines white and non-white' **(c)**, Aristotle seems to suggest that thinking of a composite requires us to combine two different items, but his claim that 'the one who thinks the separated to be separated and the combined to be combined' **(f)** does not imply this. On either interpretation, one type of thought, call it simple understanding, concerns undivided objects such as the diagonal, the commensurable, and the man. These objects also include the essences of each entity. Whenever these objects are understood, they are understood correctly. Thinking of a composite constitutes another type of thought, and one can be mistaken with regard to it, for example, 'The diagonal is commensurable'. Regarding time **(c)**, Aristotle's point is that thoughts of the type '*A* is *B*' are analogous to thoughts of the types '*A* was *B*' and '*A* will be *B*'. In each of these thoughts, the determination of time is stated either correctly or incorrectly. By contrast, simple understanding does not allow time determination.

Aristotle assumes that what determines each thought is its object. If the object is divided into two, then our thought of it is also divided, and in fact, we have two separate thoughts concerning the two halves in separate times. But if the object is single, then our thought of it is also a single thought **(d)**. Aristotle is concerned here with simple understanding. This differs from thinking that *A* is *B*. Stating something of something involves such a complex thought **(e)**, but it can be understood to be a single thought, provided that its complex object is taken to be a unity; cf. Aristotle's discussion about the perception of complex objects in *De Sensu* 7, 447a12–449a31. See also Charles 2000, 113.

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By ‘what it is to be what it was’, Aristotle refers to an essence of an entity. Understanding an essence is not a complex thought, but simple understanding (e). Aristotle likens it to touching. It is impossible to misunderstand an essence or any other simple object, because failing to understand is the same as being ignorant. However, we can be mistaken about the essence accidentally (f). This means that we may understand the essence in question correctly, but mistake it for something else. For example, we could mistake the essence of man for an essence of some other animal.

Aristotle permitted thinking of singular objects such as Cleon (c). In *De anima* II.5, 417b26–28, he refers to the knowledge of perceptible objects which are particular and external. Generally, however, he did not elaborate on this kind of thought and knowledge, focusing on the thinking and knowledge of universals such as the incommensurable and the diagonal mentioned above; see Charles 2000, 130. On Aristotle’s account of thought, see also *Metaphysics* VI.4, 1027b17–1028a4, *De Interpretatione* 16a1–17a7. For the meaning of ‘false’, see *Metaphysics* V.29, 1024b17–1025a3. For the distinction between simple and complex objects and thoughts, see also Ammonius’ commentary on *De Interpretatione*, 20.32–21.10 and Stephanus’ commentary on *De Interpretatione*, 2.2–11.

2 Appearance and Belief in Plato and Aristotle

a. Visitor: When this [i.e. assertion or denial] occurs through silent thinking in the soul, would not you call it belief?

Theaetetus: Of course.

Visitor: And what if that does not happen on its own but occurs to someone through sense perception? What else could one call such an experience correctly besides appearance?

Theaetetus: Nothing else.

Visitor: Therefore, since there is true and false statement, and of the cases just mentioned, thinking seemed to be the soul’s discussion with itself, belief the completion of thinking, and what we refer to as ‘appearing’ the combination of sense perception and belief, it is necessary that if they are the same kind of thing as statement, some of them are occasionally false. (Plato, *Sophist* 264a1–b4)

b. Neither can appearance be any one of the things which are always true, such as knowledge and understanding, for appearance is also fallible. Thus it remains to be seen whether it is belief, for belief may be true or false. However, belief is accompanied by conviction because it is not possible that one believes something without

being convinced of it. And none of the brutes has conviction, whereas many have appearance... Therefore it is clear that appearance is neither belief with perception, nor belief through perception, nor a combination of belief and perception. (Aristotle, *De anima* III.3, 428a16–22, 24–26)

c. Appearance is different from assertion and denial, for what is true or false is a combination of thoughts. In what respect, then, do primary thoughts differ from that which appears? Neither these nor even other thoughts are that which appears, but they do not occur without that which appears. (Aristotle, *De anima* III.8, 432a10–14)

d. Conviction always attends belief, for the one who believes something always assents to its being so as well. For belief about something is an assent to its being so, and assent is accompanied by conviction, since belief is a rational assent accompanied by a judgement. However, not every appearance is accompanied by conviction, because there are many non-rational animals which are capable of appearance, but not of conviction, and if they do not have conviction, they do not have assent accompanied by judgement either. And again, every belief requires composition, for it is either affirmative or negative, while not every appearance is such. Therefore what is true and false is not the same in the two cases, just as it is not the same in perception and belief either. (Alexander of Aphrodisias, *De anima* 67.15–23)

e. The conviction which accompanies a rational and intellectual cognition does not occur in any brute, because irrational cognition does not apprehend something as being true, but is only cognition of the object. It is capable of cognising the object as true, but not judging that it is true. For the cognition which apprehends that it is cognising the object itself, or that it is apprehending it truly or falsely, turns towards itself, for it will cognise itself. However, all irrational life is directed only to external objects, because it desires only these objects and cognises only them. (Pseudo-Simplicius, *In De anima* 211.1–8)

Plato distinguishes here between two types of judgement: belief (*doxa*) which occurs ‘according to thinking,’ and is a ‘completion of thinking,’ and appearance (*phantasia*) which occurs ‘through sense perception’ (a). The distinction can be understood as follows: appearance derives its contents from one’s present sense perception (e.g. judging ‘Theaetetus is sitting’ when one sees him sitting), whereas belief does not, although it may be inferentially based on earlier sense perception (e.g. when one judges, ‘Theaetetus was sitting,’ on the basis of memory); see also Grönroos 2013. There is no indication in the *Sophist* that sense perception would be confined to perceptible qualities proper to each sense organ. For this constraint in a dialectical context, see *Theaetetus* 152c1–2. Despite his reference to reasoning as ‘the soul’s discussion with itself,’ Plato did not have any idea of a mental language comparable to those discussed by late medieval authors; see below pp. 394–399. (On hypothetical forms of thought and reasoning, see *Meno* 86c–100b; for later discussion, see Lautner 2002b, 257–269.)

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In distinguishing between appearance (*phantasia*) and belief (*doxa*), Aristotle argues that belief is a sort of affirmation or denial (in other words, assent or dissent) accompanied by conviction (**b**). This is a critical allusion to Plato (**a**). One could ask whether Aristotle acknowledged any non-committal modes of thought, in other words composition and division which were not affirmed or denied. This is likely in the light of *De anima* III.7, 431a8–10: ‘Perception is similar to merely saying or thinking; when the object is pleasant or painful, the soul pursues or avoids it as if it were affirming or denying.’ There is also further evidence. He states, ‘What in the case of intellect is affirming or denying, that in the case of desire is pursuing or avoiding’ (*Nicomachean Ethics* VI.2, 1139a21–22). When deliberating what to do, an *acratia* person may reach a good conclusion, yet be prevented from acting on it: ‘The soul says that we should avoid this, but sensual desire leads action’ (*Nicomachean Ethics* VII.3, 1147a34). This seems to require that the *acratia* person does not affirm the conclusion. The predicament of the *acratia* person is compared to that of a drunken, deranged or sleeping person (1147a11–13); see Charles 1984, 130–131, 2006; Moss 2009 and 2012. Furthermore, in *Topics* I.11 Aristotle referred to the kind of dialectical problems which cannot be resolved because there are no arguments for or against them (104b14–16). One such problem is whether or not the world is eternal. Aristotle’s point is that lacking an argument, one cannot decide whether or not to believe that the world is such.

There are different interpretations of what Aristotle meant by ‘thought’ (*noēma*) and ‘that which appears’ (*phantasma*) (**c**). In linguistic terms, they are the results of the activities expressed by the corresponding verbs. It is suggested here that they should be understood in objectual rather than representative terms. Thus understood, these terms refer to what is thought, and that which appears, respectively. This does not imply that *phantasma* is to be taken as an image of the perceived object; for image, see Modrak 1987; Frede 1992a. By contrast, some recent interpreters assume that *noēma* and *phantasma* represent the external objects of thought and appearance. Thus understood, they are the means by which we gain access to those objects; see e.g. Wedin 1988, chapter 4; Caston 2006, 331–334. On the relation between *noēmata* and *phantasmata*, see also *De anima* III.8, 432a8–10 and III.7, 431b2. According to Aristotle, *phantasmata* are due to the perceptual capacity, and they can also occur in some of the non-rational animals. Although arguing that thinking requires *phantasmata*, he did not examine the question of how many *phantasmata* a thought, such as ‘Cleon is white’, involves, and in which way, if at all, *phantasmata* can be joined and separated. *De anima* III.11, 434a5–10 suggests that acting on the basis of deliberation requires making a unity out of several *phantasmata*. In commenting on *De anima* III.8,

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432a10–14, Themistius assumed that the intellect can combine the *phantasma* of day and the *phantasma* of light in different ways, for example, ‘If it is day, it is light’, or ‘It is day and it is light’, or ‘It is day but it is not light’, or ‘Let there be day and let there be light’ (*In De anima* 116.10–14). Later commentators interpreted Aristotle as drawing a more systematic distinction between apprehension and judgement. Alexander’s interpretation of Aristotle’s *De anima* III.3, 428a18–22, was strongly influenced by the Stoic distinction between appearance and assent (**d**); see **3** below.

According to Pseudo-Simplicius, all animals were capable of apprehending something truly or falsely, while rational animals were also capable of making true or false judgements. This additional capacity entailed self-reflexivity in the fact that one judges that one apprehends the object truly or falsely (**e**). See also Gerson 2005, 147–148.

3 Appearance, Truth, and Assent in Hellenistic Philosophy

a. Epicurus used to say that all sensibles are true, and that every appearance is due to something existent and like the thing which moves the sense... in the case of Orestes, when he seemed to see the Furies, his perception, being moved by the images, was true, because the images existed, but his mind was mistaken in thinking that the Furies were solid bodies. (Sextus Empiricus, *Adversus mathematicos* VIII.63)

b. Zeno used to demonstrate this [i.e. that only the wise man has knowledge] with a gesture. Spreading out the fingers of one hand and referring to its open palm, he would say: ‘Sight is like this.’ Next he brought together his fingers a little and said, ‘Assent is like this.’ Then, pressing his fingers quite together, he made a fist, and said that this was comprehension. From this simile he gave it the name of *katalēpsis*, which it had not had before. Then, he moved his left hand beside his right fist and pressed it tightly and forcefully together, saying that knowledge was like this, and that no one except for the wise man possessed it. (Cicero, *Academica* II.145)

c. The Stoics say that a sayable is that which subsists in accordance with a rational appearance. They claim that some of the sayables are complete, others incomplete. The latter are those whose expression is unfinished, for example ‘...writes’, for we ask, ‘Who?’ However, complete sayables are ones whose expression is finished, for example ‘Socrates writes.’ Thus predicates are among the incomplete sayables, whereas propositions, syllogisms, questions and enquiries belong to complete ones. (Diogenes Laertius, *Lives of Philosophers* VII.63)

d. ... I see Cato walking: a sense has shown this, and my mind has believed it. What I see is a body, and I have directed my eyes and my mind to it. Then I say,

‘Cato is walking.’ What I now express, he says, is not a body, but a certain statement about a body, which some call a proposition, others a thing expressed, and others a thing said. Thus, when saying ‘wisdom’, we understand something corporeal; when saying, ‘He is wise,’ we are speaking about a body. However, there is a very great difference as to whether one says something or is speaking about it. (Seneca, *Letter* 117.13)

e. If they say they mean that it is not judgement of this sort [i.e. assent to an appearance] but rather mere thinking that precedes enquiry, then enquiry is not impossible for those who suspend judgement about the reality of unclear things. For a Sceptic is not, in my opinion, debarred from thinking, if thinking arises from things which strike him passively and appear to him manifestly, and if it does not in any way imply the reality of what is thought. For we think, as they say, not only of real things but also of unreal things. Therefore someone who suspends judgement remains in his sceptical condition while enquiring and thinking. For it has been made clear that he assents to what strikes him by way of passive appearance insofar as it appears to him. (Sextus Empiricus, *Outlines of Pyrrhonism* II.10)

Epicurus distinguished between two types of ‘taking’: application of the sense organ to an appearance or image from outside, and the subsequent movement which arises from within (Diogenes Laertius X.50–52). This can be understood as a distinction between perception and belief. Sextus Empiricus reports the standard interpretation of the Epicurean view: all sensibles and the corresponding perceptions are true, whereas beliefs about them can be false (a). Perceptions give us the criteria by which beliefs can be judged; for discussion, see Asmis (1999, 264–275).

The Stoic Zeno distinguished between sight, assent, comprehension, and knowledge (b). The distinction between sight (or more generally, appearance) and assent shows that Zeno and the other Stoics managed to draw a clear line between merely entertaining an idea and asserting or denying it. The Stoics had different conceptions of what appearance (*phantasia*) is. An influential characterisation given by Chrysippus was that appearance is an affection of the soul which ‘reveals itself and its cause’, just as light reveals itself and the objects that it is cast upon (Aëtius IV.12.3; *SVF* 2.54). Thus understood, appearance can be any kind of perception or thought, whereas appearances that can be assented to (or dissented from) must be rational, which means that their content can be expressed in a language (Sextus Empiricus, *Adversus mathematicos* VIII.70). The Stoics referred to such contents as assertibles or propositions (*aksiōmata*), as Chrysippus’ definition shows: ‘An assertible is that which in its own right can be denied or affirmed, for example, “It is day,” “Dion is walking”’ (Diogenes Laertius VII.65).

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Assertibles are among complete ‘sayables’ (*lekta*) (c). Other complete sayables include contents of questions, commands, oaths and the like (Diogenes Laertius VII.63). Interpreters disagree on whether the Stoic term *lekton* referred to the content of an appearance as *capable* of being expressed or as *already* expressed: I have followed here Long and Sedley (vol. I, 199), who prefer the former interpretation, translating *lekton* as the ‘sayable’ (see also Frede 1994), while Nuchelmans (1973, chapter 4) argued for the latter, referring to the *lekton* as ‘what is said or predicated of something’. In assenting to a rational appearance, one assents to a *lekton* (Stobaeus II.88.2–6; *SVF* 3.171). The verb ‘subsists’ (*hyphistamenon*) in the definition ‘a sayable (*lekton*) is what subsists in accordance with a rational appearance’ (c) makes clear that the *lekton* does not exist (because it is not a bodily entity). However, it is not entirely nothing either, nor is it a mind-dependent entity, for it belongs to the most general ontological category called ‘something’ (*ti*). Other incorporeal somethings include time, place and void (Sextus Empiricus, *Adversus mathematicos* X.218). See Long and Sedley (vol. I, 163–164); Baratin 1991, 199–200.

Although the rational appearance can be identified with the commanding part which is disposed in a certain way (cf. Aëtius IV.21.1–4; *SVF* 2.836), the evidence does not determine how the *lekton* is related to this disposition. What is clear, however, is that rational appearance is prior to and independent of its being expressed in a language (d). It is worth noting that the Stoics distinguished between a body (e.g. Cato) and the body being ‘disposed’ (e.g. Cato walking) (see Simplicius, *In Categorias* 66.32–67.2; *SVF* 2.369; for walking, cf. Seneca *Letters* 113.23; *SVF* 2.836). In the light of this distinction, Seneca should rather have stated that what I see is a body disposed in a certain way, and if so, this is what I believe. Given this, the rational appearance has a complex structure even before it is articulated thus: ‘Cato is walking’. For the Stoic distinction between appearance and assent in Alexander of Aphrodisias, see 2d above.

According to Sextus Empiricus (*Outlines of Pyrrhonism* II.2), some critics raised the following dilemma to the Pyrrhonists: If they apprehend what other people talk about, they need not enquire into it, whereas if they do not apprehend it, they do not know how to talk about it and hence cannot enquire into it. Sextus replied that there are two ways to understand ‘apprehend’: one that implies assent to the reality of things, and another that does not. Sextus’ point is that a Pyrrhonist understands apprehension in the latter sense and is thus able to conduct sceptical investigation (e; see also *Outlines of Pyrrhonism* I.13). There is extensive literature on how the Pyrrhonist’s assent to appearances should be interpreted; see e.g. Barnes 1982; Frede 1987b; Fine 2000. More recent studies include Barnes 2007 and Bett 2010.

4 Judgement in Plotinus

a. ... the reasoning capacity in the soul makes its judgement, combines and separates on the grounds of *phantasmata* which are present to it and derive from sense perception. And regarding the things which originate from the intellect, it looks at what could be referred to as their imprints, and it also has the same capacity with regard to these. Furthermore, it acquires understanding as if by identifying the new and recently arrived imprints and fitting them to those which have been within it for a long time. We could call this operation the recollection of the soul. (Plotinus, *Enneads* V.3.2, 7–14)

b. ... sense perception sees a human being and gives its imprint to discursive reason. What does it say? It will not say anything yet, but only knows and stands still, unless perhaps saying to itself, ‘Who is this?’ if it has met him before, and saying with the help of memory that he is Socrates. And if it unfolds his form, it divides into pieces what the capacity for appearance gave it. And if it says whether he is good, its statement arises from what it knows through sense perception, but what it says on these matters it already has within, because it has the criterion of the good within itself. How does it have the good within itself? Because it is like the good, and has power for perception of this kind due to the intellect illuminating it. For this is the pure part of the soul and receives the traces of the intellect which are laid upon it. (Plotinus, *Enneads* V.3.3, 1–12)

c. Therefore the thinker must grasp one object as different from another, and that which is thought, being thought, must be multicoloured; or there will not be thinking of it, but only touching, and a sort of speechless and thoughtless contact, ‘pre-thinking’, because the Intellect has not yet come into being and that which touches does not think. (Plotinus, *Enneads* V.3.10, 40–44)

Plotinus assigned to discursive reason (*logizomenon, dianoia*) (re)cognition, composition and division, and reasoning (**a**). This resembles the Aristotelian position, but what was distinctive of Plotinus’ view was the idea that reason performs these functions by using imprints or images (*typoi*), and especially, in contrast to the Stoics, that some (but not all) of these images are informed by certain forms or principles which derive from within, i.e., from a higher cognitive faculty, the intellect (*nous*). It seems as if Plotinus claimed the imprints to be derived from two different sources, sense perception and the soul or the intellect, respectively, and be compared with one another, but his discussion of judgement and memory suggests a more nuanced position: sense perception produces imprints which are retained by the capacity for appearance, while discursive reason makes judgements about them with reference to memory or inner principles derived from the Forms (**b**). An example of an inner principle

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is the good which is used as a criterion when we make a judgement regarding the goodness of a given object. While intellection (*noēsis*) has the Forms themselves as its objects, ordinary discursive thinking is propositional; see Emilsson 2007, 177–185; for Plotinus’ account of memory, see King 2009.

Plotinus also discussed the nature of thinking, which is distinctive of the Intellect, the second hypostasis right below the One (ε). He conceived of this kind of thinking as the Intellect’s seeing of itself (*Enneads* V.3.10.10). In contrast to touching, thinking requires that there is a difference between the object and the thinker. Therefore, if the Intellect is supposed to think of itself, it must conceive of itself as another. Consequently, it must differentiate two things and thus ‘that which is thought... is multicoloured’, which means that the object of thought is complex; cf. Plato’s point in *Sophist* 259e that the most general kinds are intertwined with one another. The vision metaphor ‘multicoloured’ (*poikilon*) also suggests that the Intellect apprehends its variegated object all at once; see also *Enneads* V.9.6.8; V.8.6.9. This differs from the ways in which the World-Soul and the human souls think, respectively. The World-Soul apprehends its object part by part (*kata meros*; *Enneads* III.7.11), but does not reason, unlike the human souls (IV.4.16; V.8.7; VI.7.1). The objects of human thought are typically composites as expressed by the proposition ‘Justice is beautiful’ (*Enneads* V.5.1, 38–41). For discussion, see Emilsson 2007, chapter 4.

Chapter 20

Ancient Theories of Reasoning

Miira Tuominen

In this section, the central question is whether we can find ancient discussions concerning what happens in the mind when a conclusion is drawn. Did ancient authors suppose that there is a psychological force that compels us to accept the conclusion when the premises are accepted and the inference is valid? Or, if the inference is not deductively valid but adds to the credibility of the conclusion in another way, e.g., by being inductive, what happens in the mind when such an inference is drawn? In general, psychology of reasoning was not a vital topic in antiquity. Reasoning was typically considered from a logical, not from a psychological point of view. For example, in Stoic sources the necessity by which the conclusion follows from the premises is described in terms of the truth conditions of a conditional; no psychological force is postulated. However, some ancient authors made passing remarks here and there which seem to imply that we are somehow forced to draw a conclusion if the inference is valid. Whether this force is psychological or not, was not specified. In a similar vein, we can also ask what happens in the mind when we reason falsely. This was not a prominent topic either, but we find Aristotle's passing remark that in language-based fallacies we mix the things with their symbols in language (2).

Furthermore, some indications are found that a visual presentation of a valid form of inference was taken to be important in grasping validity. As noted above (pp. 246–248), the central metaphor for thought in the Platonic-Aristotelian tradition was vision, not language. Aristotle, for example, assumed that thinking in general and inference in particular is not essentially dependent on language. When

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discussing syllogistic figures, he typically referred to pictures or diagrams that make the relations between the syllogistic terms and the validity of an inference evident (2). On the other hand, considerations concerning inference were in Plato and Aristotle based on a special dialogical argumentation technique, examples of which are found in Plato's early dialogues, and of which Aristotle's *Topics* is a systematisation. The supposition that dialogical argumentation in a clearly defined social context is a standard form of reasoning prevails also in the few references that these philosophers make on the psychology of reasoning, and thought is also likened to inner speech or dialogue (1).

The idea that inference is dialogical in character is reflected in Aristotle's logical terminology: premises are called *protaseis*, literally 'those that are put forward' to the answerer to be accepted or denied. *Petitio principii* is a Latin translation for 'asking that which is there at the beginning', i.e., trying to make an interlocutor accept as a premise what needs to be established in the discussion. Aristotle also occasionally talks about a valid inference forcing us to accept the conclusion, given that the premises have been accepted (2). A similar idea is found in the background of the argumentation technique employed by Socrates in Plato's early dialogues: once the contradictions within the interlocutor's claims have been made explicit, he or she should abandon the thesis presented at the beginning of the discussion. However, no distinctly psychological force is postulated in Plato's descriptions of the Socratic *elenchos*.

In late ancient Platonism, discursive reasoning which involves transitions from one term to another and from one statement or proposition to another was taken as being inferior to intellectual vision. The former was described as a kind of movement, whereas intellectual apprehension proper was assumed to take no time and to be like instantaneous vision of a complex whole at a single glance (3). Even with the general description of reasoning as movement, no specific account was given as to what the mind does when it draws a conclusion of an inference.

With respect to inductive inferences, Aristotle suggested that they are somehow clearer and more easily accepted than deductive inferences, because inductions contain particular premises that are more familiar to us than the generalisations needed for a deductively valid syllogism (4). The point, however, was not that inductive inferences *as inferences* would be more compelling. Quite the contrary: he explicitly characterised deductive inference as more compelling, even though he did not spell their compellingness out in psychological terms. Rather, induction should be taken as being more easily accepted in the sense that its premises, i.e., particular cases or case-types, are better known to us than generalisations that appear in the conclusions of inductive arguments.

Anticipating, in a sense, later discussions concerning induction, ancient medical empiricists challenged the idea that we make universal generalisations on the basis of observations. Rather, they suggested that repeated similar observations cause expectations that in the future the outcome will be similar, but no universal generalisation is formed (4).

1 Is Thinking Inner Dialogue?

a. Socrates: Excellent. Do you call ‘thinking’ the same as I do?

Theaetetus: What do you call thinking?

Socrates: A discussion the soul has with itself about the things that it is concerned with. (Plato, *Theaetetus* 189e)

b. For [according to the Stoics], the appearance leads the way, and then thought that is capable of talking, utters in language what it has undergone by the appearance. (Diogenes Laertius, *Lives of Philosophers* VII.49)

c. An inquiry with other people happens through words, whereas an inquiry carried out by oneself is not worse than one involving the thing itself. (Aristotle, *Sophistical Refutations* 7, 169a38–40)

The view that thinking is inner conversation of a sort and thus happens by the aid of language is found in Plato and was prominent in the Stoics (**a**, **b**). For the Stoics in particular who introduced the first ancient propositional logic, the linguistic form of sentences was crucial when they articulated the way in which reason works. (For the similarities and differences between Stoic logic and modern propositional calculus, see Bobzien 1999b, 114–115.) Even though Aristotle did not quite accept the suggestion that reasoning happens through language (**c**), he did not altogether abandon the view according to which inner thinking bears a resemblance to dialectical arguments in a social context (see also *Sophistical Refutations* 7, 169a22–27). This becomes clear, e.g., on the basis of the fact that when he lays out rules for dialogical social argumentation, he very often points out that the very same rules apply when we make silent inferences in our minds and this holds in the case of contentious arguments as well (*Sophistical Refutations* 1, 165a17–18). As it seems to have been for Plato as well, the social form of argumentation was, for Aristotle, the prior form, and the silent inference was characterised in relation to it. A similar supposition was preserved in later Aristotelianism in antiquity. Alexander of Aphrodisias points out that syllogisms are used as a means of inference either in a discourse with an opponent or in silent reasoning (*In Topicorum libri octo* 7.26–8.5).

With respect to fallacious reasoning, Aristotle pointed out that if we are engaged in argument with other people, we are more easily deceived because we must use words, whereas solitary inquiry is not equally liable to such deception (**c**). Here Aristotle refers to an assumption that thought is not necessarily linguistic but involves some kind of affections of the soul that are like the things they are notions of. (For this assumption, cf. *De interpretatione* 1, 16a4–8, quoted above, p. 244).

2 Inference and Fallacious Reasoning

a. [I]t is necessary for the person who asserts those [i.e., the premises] to assert that [i.e., the conclusion] as well (Aristotle, *Posterior Analytics* I.6, 75a26–27).

b. When three terms are related to each other in such a way that the minor term is entirely in the middle, and the middle is either entirely in or entirely outside of the major, there will be a complete syllogism of the extreme terms; I call that term ‘middle’ which is such that it is in another, and something else is in it, and which also comes to be a middle one by its position (Aristotle, *Prior Analytics* I.4, 25b32–36)

c. An argument is an organised whole of premises and a conclusion. Its premises are said [by the Stoics] to be those propositions that are assumed by agreement for establishing the conclusion. The conclusion is the proposition that is established from the premises. For example, in this argument ‘if it is day, it is light; but it is day; therefore it is light’, ‘therefore it is light’ is the conclusion and the rest are premises. Of arguments, some are deductive, others non-deductive. They are deductive when the conditional that has as an antecedent a conjunction of the premises, and as the consequent the conclusion, is sound. (Sextus Empiricus, *Outlines of Pyrrhonism* II.135–137)

d. Those who introduce a necessary conditional say that the conditional is sound, whenever the contradictory opposite of the consequent is in conflict with the antecedent; ... whereas those who claim ‘entailment’ to be a criterion, say that it is true when the consequent potentially inheres in the antecedent. (Sextus Empiricus, *Outlines of Pyrrhonism* II.111–112)

e. According to Chrysippus’ most contested view, non-rational animals also have a share in the notorious [Stoic] dialectic; at least, this man claims that the dog follows the fifth indemonstrable argument figure with several disjuncts when it comes to a crossing of three tracks and, having sniffed the two to which the prey did not go, immediately springs to the third one without sniffing it. (Sextus Empiricus, *Outlines of Pyrrhonism* I.69)

f. As in our illustration above those, who are not adept at operating counters, are deceived by those who know how to do it; in a similar manner in the case of arguments, those who are inexperienced in the power of names reason falsely, both when reasoning themselves and when listening to others. (Aristotle, *Sophistical Refutations* 1, 165a13–17).

Even though Aristotle did not analyse arguments in terms of psychological forces, he occasionally suggests that some sort of necessity exists in valid arguments which force us to assert the conclusion when the premises have been asserted (**a**); in the *Metaphysics* (IV.6, 1011a15), he speaks of ‘a force of argument’ (*bia en tō logō*). He also refers to the compellingness of valid arguments when comparing deductive and inductive arguments. He claims that

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deductively valid arguments are more compelling (*biastikōteron*), whereas inductions are more convincing and clearer (*pithanōteron*, *saphesteron*) (*Topics* I.12, 105a18–19 quoted below in **4a**, see comments therein). In the *Nicomachean Ethics* (VII.2, 1146a24–8), Aristotle refers to another kind of ‘force’ that may affect our thinking. This is when our reasoning becomes restricted in the face of an unresolved puzzle or *aporia* (see also *Metaphysics* III.1, 995a27–b1). For the power of arguments in other authors, see Galen, *Institutio logica* 15.8 (*dunamis*) and 16.12 (*apodeixēōs dunamis*). When commenting on the lines quoted in **a**, Philoponus and Themistius do not pay any attention to the possible psychological implications of necessity. Rather, they claim that necessity is that by which a true conclusion follows if true premises are posited (Philoponus, *In Analytica posteriora* 95.22–29); cf. Themistius, *In Posteriorum Analyticorum paraphrasis* 17.9–12.

Aristotle’s way of referring to the positions of the terms (**b**) indicates that he considered syllogisms in terms of diagrams. (For a suggestion of what they might look like, see Ross’s commentary 1949, 302.) Aristotle called only the first figure ‘perfect’ and assumed that it is more evident than and primary to the others. This assumption, which seems somewhat arbitrary, is perhaps related to the pictures Aristotle had in mind (whatever their exact nature is). Striker also notes (2009, 95) that Aristotle may have changed the standard order of the premises to bring out clearly the ‘intuitive appeal’ of the form that most clearly shows the transitive nature of the relation of inclusion. As Striker also points out, according to Alexander this was done for didactic purposes (*In an. pr.* 59.19–25). Thus the perfect nature of the first figure most probably refers to the way in which it best makes evident how the relation between the major and middle term expressed in the premises will affect the relation between the major and minor in the conclusion. For his terminology concerning the position of the terms, see also *Prior Analytics* I.4, 26a21–22: ‘I call “major” the term that is the extreme term in which is the middle term, and “minor” that which is under the middle’ (*hupo to meson on*).

The Stoics considered thought and reasoning from two distinct viewpoints: from the point of view of the content of thought, and from a psychological perspective. As to the former, abstract entities resembling propositions called *axiōmata* and predicates were postulated, and the texts quoted here (**c**, **d**) approach inference in this way. (On the differences between Stoic *axiōmata* and modern propositions, see Bobzien 1999b, 95–96.) Psychological remarks concerning inference are not common in the Stoic sources. The famous text in which the dog chooses the third route without sniffing it (**e**) probably indicates that Chrysippus assumed that we draw the conclusion of a valid inference fairly automatically in our minds, without explicitly thinking of the premises, P1: The prey did not go this way, P2: The prey did not go that way, and P3:

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There are three possible ways, and concluding from these, C: It went this way. If the dog, as is supposed in the argument, chooses the third road without sniffing it, this is supposed to show that it has drawn the conclusion in a similar manner. For the five indemonstrable argument forms of Stoicism (ε), see Diogenes Laertius VII.76–81=LS 36A, Sextus Empiricus, *Outlines of Pyrrhonism* II.156; *Adversus mathematicos* VIII.223.

In his discussions on sophistical and eristic arguments – i.e. arguments that are deceptive for different purposes, the former for making money and the latter for the sake of quarrel – Aristotle illustrates the origin of fallacies by reference to an analogy: as the tokens of the counter can stand for different integers, similarly names can stand for different kinds of things (f). We may err in concluding something about things on the basis of the similarity of names, when only the names are similar but the things are not (see also *Sophistical Refutations* 7, 169b1–3). This seems to imply that, when engaged in a language-based fallacy, the mind makes some sort of error in mixing the thing with the symbol used to refer to it. He also refers to fallacies that arise from a perceived connection: when a colour, for example, has dominantly occurred with a certain taste (as yellow with the taste of honey), the same colour is associated with the same taste in another case, such as bile (*Sophistical Refutations* 5, 167b1–8). However, Aristotle does not elaborate on the psychology of fallacies.

The Stoics only seem to have discussed fallacies that are based on ambiguities in language. For a classification of such fallacies, see, e.g., Galen, *De sophismatis* 4 (=LS 37Q). For discussion, see Ebbesen 1981a, vol. I, 21–51; Atherton 1993; Bobzien 2005.

3 Reasoning as Discursive Movement Distinguished from Instantaneous Apprehension

a. [G]oing up to the non-hypothetical, to the principle of all, and having grasped it, [reason] possesses it and what follows from it, and comes down to the ultimate [conclusion] using no perceptibles at all, but forms themselves; it proceeds through forms towards forms and ends in forms. (Plato, *Republic* VII, 511b–c)

b. Producing its acts, first one, then another, and then yet another successively, [the soul] brought forth the succession with its activity; and that which was not there before emerged together with discursive thought following the activity [of the soul] (Plotinus, *Enneads* III.7.11, 35–39).

c. One should not presume that the gods, or those who are utterly blessed, see propositions There [in the intelligible realm], but that each of those things that are

spoken of There are beautiful symbols, such as some imagined were in the wise man's soul; but they are not drawn icons but existing ones. This is why the past thinkers called ideas 'beings'.

It also seems to me that the wise men of Egypt grasped exact or inborn knowledge: of those things of which they wanted to show something through wisdom, they must not go through arguments and premises with written letters, neither use those [signs] that imitate the sounds or utterances of propositions. Rather, they drew symbols and drew one symbol for each thing in the hieroglyph to reflect the non-transitional nature of what is There. Thus each symbol is a kind of knowledge and wisdom and a single item, not a process of discursive reasoning or deliberation. Later, people discovered ... an evolved image in something else, from that which is a single item, such that it already expresses in succession both itself and the cause of why it is thus. (Plotinus, *Enneads* V.8.5, 19–V.8.6, 12)

Plato's language of 'going up' and 'coming down' (a) suggests that dialectic, proceeding in the realm of ideas, is, at least in some sense, a process that resembles movement insofar as it has directions (i.e. an ordering relation), and involves temporal succession.

Plotinus claimed that discursive reasoning is inferior or secondary to another, non-discursive activity of the soul, and that reasoning produces succession – a temporal ordering that was not there in the other, primary activity (b). For the view that reasoning (*ratiocinatio*) is inferior to understanding (*intellectus*), because the former involves movement whereas the latter does not, see also Boethius, *Consolatio philosophiae* IV, prose 6, section 17, and Galen *Institutio logica* 3.2 for the contrast between moving thoughts (*noēseis*) and fixed conceptions (*ennoiai*). Aristotle also refers to the assumption that reasoning involves movement in *Physics* VII.3, 247b10–11: '... for we are said to know and to understand when our reason has become still and has stopped'. The idea that reason comes to a standstill seems to imply that it was not at rest before, i.e., that when it was moving it did not yet know and understand. Aristotle makes clear in this context that the notion of movement proper is not applicable to the transitions of reason, but he does not specify whether such movements are inferences or some other form of ratiocination.

In his *Ennead* on dialectic, Plotinus employs the metaphor of weaving (*plekein*) for intellectual activity (I.3.4, 9–20). However, as opposed to ordinary discursive reasoning that is described as movement, this weaving happens in the intelligible realm in which there is no movement in the same sense. For Plotinus on dialectic, see, e.g., Schiaparelli 2009; Emilsson 2007, 176. As mentioned, an important assumption in Plotinus and later Neoplatonism is that instantaneous apprehension of complex wholes in the intellect is superior to such discursive reasoning that moves from one proposition to another

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(c). The reference ('such as some imagined were in the wise man's soul') is to Plato's *Symposium* 215b and 216e and Alcibiades' description of the statuettes of gods that he has seen in Socrates' soul. Aristotle also seems to suppose that the most perfect intellect, namely the divine one, is not involved in ratiocination; it is unchangeable, and so any movement from premises to conclusion is excluded from it (*Metaphysics* XII.9).

4 Inductive Inference: Generalisation, Perfect Induction, Grasping a Universal

a. Induction is accessing universals from particulars, e.g., if the skilled helmsman is the best [helmsman] and the skilled charioteer the best [charioteer], then in general the skilled one will be best in each particular case. Induction is more convincing and clearer and better known through perception, and common to most people, whereas a deductive argument is more compelling, and more effective against opponents in argument. (Aristotle, *Topics*, I.12, 105a13–19)

b. Induction, and a syllogism through induction, is [an argument] in which one concludes the major term of the middle term by means of the minor... For example, let A stand for longevity, B for those that are bileless and C for every long-lived [species], e.g., human being, horse and mule. Then A belongs to all C (for all C are long-lived), and also B, bilelessness, belongs to all C. Now if C is convertible with B and does not extend beyond [B], the middle term, then it is necessary that A belongs to [all] B... It must be grasped intellectually that C is a compound of all particular [species that are long-lived], since induction proceeds through all cases. (Aristotle, *Prior Analytics* II.23, 68b15–29)

c. Thus from perception comes memory, as we say, and from many memories of the same thing, experience; for multiple memories constitute a single experience. From experience or from a whole universal that has come to rest in the soul, from the one along with the many that is the same in all of them, comes the starting point of art and knowledge; if it is concerned with becoming, it will be one of art, if with being, one of knowledge... Our soul is such that it is capable of undergoing this... When the first similar object has come to rest, there will be a first universal in the soul, for even though the particulars are perceived, perception is about the general, for instance, [perception] of a human being, and not of the human being Callias; we remain in these until those which are universal and without parts come to a standstill, for instance an animal of this sort, and animal, and similarly in that case. It is now clear that the first [starting points] become familiar to us through induction, because perception similarly implants in us the universal. (Aristotle, *Posterior Analytics* II.19, 100a3–9; 100a13–b5)

d. He [the doctor] has often seen that evacuation has helped in such cases, and hopes that when he uses it now it will be useful. (Galen, *On Sects for Beginners*, Kühn 1, 72.10–12)

As mentioned above, Aristotle claimed that induction is clearer as an argument than deduction (**a**). His point seems to be that even though inductive arguments do not have the compelling force of deductively valid arguments (*sullogismos*), they are convincing in the sense that their premises, being closer to perception, are more familiar to us – a point related to Aristotle’s distinction between what is better known *to us* and what is better known *in nature* (*Posterior Analytics* I.2, 71b33–72a5, *Prior Analytics* II.23, 68b35–37, *Topics* VI.4, 141b3–14., *Physics* I.1, *Metaphysics* VII.3, 1029b3–12, *Nicomachean Ethics* I.4, 1095a30–b5). In the *Rhetoric*, Aristotle refers to the idea that in rhetorical induction, i.e. in arguments from examples, the premises are more familiar (I.2, 1357b29–30). When commenting on inductive inferences (*In Topicorum libri octo* 86.25–87.1), Alexander of Aphrodisias points out that in induction the universal does not follow from the particulars necessarily because it is impossible to go through the indefinite (or infinite) number of particular cases. Furthermore, if one went through all particular instances, the inference would no longer be inductive. Similarly, Aristotle distinguished a form of induction that is in fact deductive (that is, based on all particular cases in **b**). However, the particular cases that he speaks of are not individuals but of case-types or species, such as ‘human being’, ‘horse’, and ‘mule’.

In a difficult passage in which Aristotle describes the process through which universals come to be instilled in our soul (**c**), he mentions the term ‘induction’ (*epagōgē*) once (100b4). *Prima facie*, the reference seems to imply that the universals are acquired through inductive inference; for the view that the chapter described inductive inference, see Bolton 1991. However, a closer reading shows that this is far from clear. Aristotle says that the first principles or terms have to become known to us through induction, because perception imprints the universal in us *in this way*. Whether ‘this way’ means *induction* here is an open question. Even if it did, Aristotle does not describe a process of *inference* in the chapter; he mentions neither premises, conclusions, nor a structure of inference. Rather, he refers to a specific cognitive function of the soul: namely, that of being able to grasp the universal from the particulars. Even though describing soul’s function, the account does not pertain to how the mind arrives at the conclusion of an inductive *inference* (for more on this, see Tuominen 2007a, 102–110, 181–193; Tuominen 2010b; Leshner 1973; Kosman 1973); rather, the focus is on our intellectual capacity to grasp generalities on the basis of particular cases.

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In his account of the inductive syllogism, Aristotle gives only a brief hint about what the mind does to enable us to construct the syllogism: the compilation of the species, including all the relevant particular cases, must be understood **(b)**. How the mind does so is not explained in detail. Perhaps Aristotle leaves it to a kind of intellectual capacity, as described in **c**. (For another translation of the beginning of **c**, see p. 218 above.)

Ancient doctors debated about the correct methodology of medicine. The empiricists challenged the rationalists, who claimed that doctors must have a rational insight into the nature of things, and on the basis of such knowledge they can cure patients. The empiricists, meanwhile, argued that doctors do not cure on the basis of universal theoretical knowledge, but store up their own experiences and experiences reported by their predecessors. If a cure has proved useful in more than a half of the cases, the doctor expects, or *hopes*, that it will do the same in the case at hand, as well **(d)**. No universal generalisation is formed in the doctor's mind, and it would be an exaggeration to take the expectation to be a form of inference (see Tuominen 2007b). Rather, it seems to be a fact about the human mind that the greater the frequency of positive cases testifying for the cure, the greater the doctor's expectation that it will work in the future. Even though not articulated in similar terms, the empiricists' argument bears some resemblance to Hume's famous analysis of induction.

Chapter 21

Medieval Theories of Judgement and Reasoning

Mika Perälä

The most important ancient distinctions concerning judgement and reasoning were acknowledged and developed by medieval thinkers. In general, medieval thinkers distinguished between three modes of intellectual understanding: apprehension of simple objects, combining and separating these objects, and reasoning from the known to the unknown. The first mode is concerned with concept formation, the second with making a judgement, and the third with acquiring knowledge on the basis of what is already known by judgements. This distinction corresponds to that of standard logic textbooks between terms, propositions and reasoning (1).

The logical works of Boethius provided early medieval writers with the context from which they acquired and developed their understanding of the nature of composition and division. In later medieval thought, important sources were Aristotle's *Metaphysics* IX.10, *De Anima* III.6 and the *De interpretatione*. Various detailed questions were associated with the main topic, for example, whether these acts are concerned with the objects of thought or the thoughts themselves, and whether they are simple or complex by nature. Composition and division were referred to as positive apprehension and negative apprehension, respectively, or in some contexts, as propositions (2).

In addition to the distinction between the three modes of intellectual understanding, it was commonplace to differentiate between apprehending something, and assenting to it or dissenting from it. Apprehension and assent (or dissent) were regarded as different mental acts, and the act of assent was seen to be directed to the apprehension understood as a proposition. John Buridan emphasised that knowledge and belief are not propositions, but different assents to them (3).

The question of whether assent should be identified with belief had an important implication: if assent is identical with belief or implies belief, knowledge requires belief, provided that knowledge entails assent, which was a commonly held view.

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Some authors, such as Thomas Aquinas, assumed that assent cannot be identified with belief and that knowledge does not imply belief, whereas others, such as William of Ockham and Robert Holcot, maintained that assent is a belief and that knowledge thus implies belief. In discussions concerning the distinction between knowledge and faith and between knowledge and belief, it was pointed out that assent can be given with varying degrees of conviction, depending upon the nature of evidence (4).

Reasoning was rarely discussed from a psychological point of view. However, it was commonly held that reasoning results in the knowledge of a conclusion, and thus removes one's doubts about it. As for fallacies, they were analysed along the lines presented in Aristotle's *Sophistical Refutations*. Nevertheless, the mental language theorists such as William of Ockham raised some new points of interest. Ockham argued that mental language is free from the errors which are based on linguistic ambiguities or grammatical shortcomings, only admitting logical failures (5).

1 The Three Modes of Intellectual Understanding

a. In writing about logic, the following order of presentation is necessary: given that arguments are composed of propositions, and propositions of expressions, the one who writes about logic comprehensively needs to write first about simple locutions, then about propositions, and finally complete the logic with arguments, as did our master Aristotle who wrote out the *Categories* for the doctrine of expressions, the *De interpretatione* for the doctrine of propositions, and the *Topics* and *Analytics* for the doctrine of arguments. (Peter Abelard, *Glossae super Porphyrium*, in *Logica ingredientibus*, 2)

b. As the Philosopher states in *De anima* III [430b26–30], the operations of the intellect are twofold. One is that by which the intellect apprehends the essence of each thing in itself, and this is referred to as the understanding of indivisible objects; the other is that of composing and dividing. However, there is also a third operation, that of reasoning, by which the reason proceeds from what is known to the study of what is unknown. The first of these operations subordinates the second, because there cannot be a composition and division of objects unless these objects have been apprehended simply. Then again, the second subordinates the third, for clearly one must proceed from some known truth to which the intellect assents in order to acquire certitude of something that is not yet known. (Thomas Aquinas, *Expositio libri Peryermeneias*, prooemium, 1)

c. We call simple understandings those which are like certain simple actions and times which are not composed of any parts following one another, as opposed to composite ones... Just as the one who talks and says, 'A man walks', proceeds through many meaningful expressions, so the one who hears proceeds by putting together proper understandings on the basis of single expressions: first, when hearing 'man', which is established to signify a man, one understands man, and then, when hearing 'walks', one understands walking and combines it with the man. (Peter Abelard, *Tractatus de intellectibus* 31–32)

d. Apprehension is a simple intellectual acceptance of, for example, man or animal. Conception, in turn, is a complex intellectual acceptance, for example ‘Given that man is an animal, it is capable of laughter’. And again, reasoning is an argumentative intellectual acceptance, such as ‘If man is an animal, it is capable of perception’. (John of la Rochelle, *Summa de anima* II.118 (284))

Peter Abelard’s distinction between expressions or terms, propositions and arguments was standard in medieval logic (**a**; for Abelard’s logic, see e.g. Wilks 2008). Aquinas explains the same classification in the beginning of his commentary on Aristotle’s *De interpretatione* (**b**); see also the foreword of his commentary on the *Posterior Analytics* (proemium, 4). In the introduction to his *Summa logicae* (OPh 1, 6), Ockham states that logical inquiry begins with terms and proceeds to propositions and finally to syllogisms and other kinds of argumentation; for a general discussion on these three topics, see McCord Adams 1987, vol. 1, chapters 10–12. This distinction corresponded to the three modes of intellectual understanding: simple understanding, composite understanding, and reasoning. Abelard deals with these, both in a speaker and a listener (**c**). According to him, the criterion for simple understanding is that it is not a composite of several successive understandings. Thus understood, a simple understanding can be concerned with multiple objects such as ‘people’, ‘flock’ etc. (*Tractatus de intellectibus* 33).

John of la Rochelle’s distinction between apprehension, conception and reasoning is based on the same distinction between the three modes of understanding (**d**). The second example he gives is somewhat confusing. One might have expected that he would simply refer to the judgement, ‘Man is risible’, and not to something that consists of two judgements and looks like an inference. However, his point seems to be that while man is taken to be unique among the animals in being risible, here this property is regarded as a difference with respect to the other intellectual beings (i.e. angels and God) which have no body, and are thus incapable of laughter. For a study of la Rochelle’s psychology, see Ryan 2010.

2 Composition and Division

a. Simple understanding is such that it has no parts, such as understanding singular words, for although when hearing the name ‘man’ I attend to many things at a time, comprehending the matter, forms and images of several things altogether (in other words, the substance and substantial quality), there is still one simple act referred to as the understanding, through which I contemplate all the aforementioned things, namely, the substance of animal and the differentia informing it. However, if I hear ‘mortal rational animal’, which is an expression, I apprehend, through many acts, that which I first grasped through one intellectual act ... However, one and the same

understanding can be called both simple and composite, just as we call one substance not only indivisible, but also many, when the limbs of a man coincide with one person. Thus also one understanding is called not only simple, having no parts, but also composite for clearly the act of understanding, running through images, renders their conjunction or disjunction unified. And again, just as multiplex understanding can be concerned with the same thing, if people understand this object as many, so it can be concerned with many things if I comprehend them by one intuition, or conjoin or disjoin them separately, but simultaneously. (Peter Abelard, *Glossae super Peri hermeneias* 1, 94; 96 (52–54))

b. I respond that the human intellect must understand by composition and division. For when the intellect passes from potentiality to act, it resembles in a way the generated things, which do not attain perfection at once, but acquire it gradually. Similarly, the human intellect does not acquire complete knowledge of an object by the first apprehension, but it first apprehends something of it, such as its quiddity, which is the first and proper object of the intellect. Then it understands the properties, accidents and the circumstantial habitudes pertaining to the essence. Thus it necessarily relates one thing with another by composition or division; and it proceeds from one composition and division to another, and this is reasoning. However, the angelic and the divine intellect are like incorruptible things which have their complete perfection right from the beginning. For this reason the angelic and the divine intellect possess the entire knowledge of an object all at once, and thus in knowing the quiddity of an object they know simultaneously whatever we can know by composition, division and reasoning. (Thomas Aquinas, *Summa theologiae* I.85.5c)

c. The proper object of understanding is the quiddity of a thing, and therefore the intellect, properly speaking, does not make mistakes with respect to it. However, it can be mistaken regarding that which stands in a relation to the essence or quiddity of a thing, in referring one thing to another, or in combining or dividing, or reasoning. For this reason it cannot be in error in the case of those propositions which are immediately known on the basis of the quiddity of the terms, as is the case with the first principles. Furthermore, the conclusions derived from them with scientific certitude are infallibly true. However, the intellect may be accidentally deceived as to the quiddity of composite things. This is not because of its organ, for the intellect is not a capacity which would use an organ, but because of the composition involved in the definition, when, for instance, the definition of one thing is false with respect to another, such as the definition of circle when applied to a triangle, or when a definition is false in itself, implying the composition of what is incompatible (for example, to consider ‘a winged rational animal’ as a definition of something). Thus we cannot be mistaken with respect to simple objects the definitions of which cannot admit composition. However, if we do not touch these objects, we fail to understand completely, as stated in *Metaphysics* IX. (Thomas Aquinas, *Summa Theologiae* I.85.6c)

d. Two things are therefore joined with Socrates through the predicate ‘white’: whiteness as conjoined, and a white thing (that is, the thing itself affected by whiteness) as subsistent; but only whiteness is predicated, since it alone is what is intended to be joined. For not everything that is joined is predicated, but only that which is

intended to be joined by a proposition. For whoever utters the proposition ‘Socrates is white’ only declares that whiteness is in Socrates. (Peter Abelard, *Glossae super Peri hermeneias* 3, 94 (122))

e. When one says, ‘Man is white,’ we have to reply that ‘man’ does not simply refer to a thing contained in that which is man. This term preserves nothing from the meaning of ‘animal’, and ‘white animal’ implies nothing of humanity, and it is by this force that singulars are taken simply when they are conjoined. The force of the copulative or the whole expression is not such that it proposes man to be white in that which is man, but it simply states that which is man to be the same as that which is white. (Peter Abelard, *Glossae super Porphyrium*, in *Logica ingredientibus*, 60)

f. In the fifth chapter, then, I also suppose that affirmative propositions signify that which is the same, or that which is becoming the same, or that which will be the same, or that which could be the same depending on the proposition in question, with respect to what the terms suppose. Thus, if I say, ‘A is B,’ I am signifying that that which is A is the same as that which is B, and if I say, ‘A has been B,’ I am signifying that that which has been A is the same as that which has been B, and similarly with other cases. (John Buridan, *Tractatus de consequentiis* I.5 (25))

Abelard discusses simple understanding, conjoining and dividing as modes of cognition in his commentary on Aristotle’s *De interpretatione* (a). His point is that we can apprehend a single object, such as the substance of man, in two different ways: either simply or by composition. If we understand the object simply, we understand it through one act. This corresponds to the way in which we grasp single terms such as ‘man’. And if we understand the object by composition, we understand it through several acts, and this corresponds to the way in which we grasp composite terms, for example ‘mortal rational animal’. Abelard stresses that although understanding by composition happens through several acts, it nevertheless constitutes a unity because it is concerned with a single object. See also Abelard’s argument in the *Dialectica* (154–155), in which the starting point is Boethius’ statement that ‘the proposition is an expression signifying what is true or false’ (*De topicis differentiis* 1, 1174B7–8). Abelard argues that in the statement ‘A man runs’ we are concerned with an external object, and combine the running with the man, not the thought of the running with the thought of the man. Furthermore, when one combines ‘being a man’ with Socrates, one does not, by this act of combination alone, understand him as being an animal. This indicates that Abelard considers ‘being a man’ to be a simple item of combination, which is independent of other items, such as ‘being an animal’. For discussion of Abelard’s compositional account of thought, and of its contemporaneous criticism, see Lenz 2007.

According to Aquinas, the human intellect acquires the full knowledge of an object through different stages (b). First, we understand something

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of the object, such as its quiddity or essence, properties or relations. While quiddity is ‘the first and proper object of the intellect’ in the sense that we cannot be mistaken about it (see also **c**), this does not imply that we should understand quiddity prior to properties and relations. We then combine and divide what we have understood, and finally move from one composition and division to another. By contrast, the angelic and the divine intellect are able to understand the whole object at once. In line with Aristotle, Aquinas argues that we cannot be mistaken about the quiddity of an object. However, we can be mistaken regarding its relation to other things, and this holds equally for simple and complex objects (**c**). For example, we can mistakenly apply the definition of circle to a triangle. Cf. Aquinas’ *Commentary on Aristotle’s Metaphysics*, IV.6, n. 603–605. For Aquinas’ account of thought in general, see e.g. Kenny 1993, chapters 3 and 7–10; Pasnau 2002a, chapters 9–10.

Medieval commentaries on Aristotle’s *De anima* typically touch upon composition and division without going into more detail; see e.g. anonymous *Sententia Super II et III De anima* III.4, 432–444 (ed. Bazán); Peter of Spain (pseudo), *Expositio Libri De anima*, 334–336; Albert the Great, *De anima* III.3.1; John Buridan (?), *In Aristotelis De anima quaestiones*, ed. Batar, III.1.3. In late medieval discussions on mental language some new ideas were put forward. For example, William of Ockham argued that mental propositions are complex, consisting of the subject term and the predicate term conjoined by the copula, each of these being a separate simultaneous act of the soul. After Ockham, many writers were involved in the discussion of how the difference between ‘Omnis homo est animal’ and ‘Animal est omnis homo’ is distinguished in mental language when the acts related to these propositions are not extensional and simultaneous. See Broadie 1989, 111–113; Panaccio 2004, 33–34; Nuchelmans 1980, 95–96; Maierù 2004, 35–39.

Abelard seems to assume that people generally understand the statement ‘Socrates is white’ in accordance with the inherence theory of predication, rather than the identity theory of predication (‘the same which is Socrates is white’), which he developed in his own logic (**d-e**). In late medieval logic, the identity view became the standard theory (**f**). For Abelard’s view, see Rosier-Catach 2003; for identity predication in general, see Malcolm 1979.

3 Apprehension and Assent

a. It is clear from what has been said that in the operation by which the intellect grasps the simple essences of objects, assent does not occur, because there is no truth or falsity. For we are not said to assent to something, unless we hold to it as if it were true. Similarly, the one who doubts does not give an assent because he does

not tend to one side more than to the other side. This applies similarly even to the one who does not have an opinion because his position is not established with respect to either side ... By contrast, the one who knows has both cogitation and assent such that the cogitation causes the assent, and the assent terminates the cogitation. On the grounds of synthesising the principles into conclusions, he assents to the conclusions by resolving them into the principles. At this point, the motion of the thinker is settled and calmed down. For in the case of knowledge, the motion of reason starts from the principles of the intellect, and it terminates at the same intellect by way of analysis. Thus, it does not have an assent and cogitation in the same way. Instead, cogitation results in an assent, and the assent calms the cogitation. But in the case of faith, assent and cogitation are in the same condition. For assent is not occasioned by the cogitation, but by the will, as it is said. However, since the intellect does not terminate at one point in such a way that it would be carried all the way to a proper terminal point which is a vision of some intelligible object, it follows that its motion is not yet calmed. However, it still cogitates and inquires into the matters that it has faith in, even if it assents to these matters most firmly. (Thomas Aquinas, *Quaestiones disputatae de veritate* 14.1)

b. Regarding the first of those, I claim that the act of apprehension is really distinguished from the acts of assent, dissent, and doubt, and it is compatible with any one of them, although perhaps naturally it cannot occur without any one of them. Therefore these acts take place so that once anybody apprehends some proposition, he also assents to this proposition, or dissents from it, or doubts of it. However, this act of apprehension is really distinguished from any one of those. (William of Ockham, *Ordinatio*, prologus 1 (OTh 1, 57–58))

c. Knowledge and opinion coincide first because neither is a proposition, while each is an assent that is given to a proposition, and by which one assents to a proposition. (John Buridan, *Summulae de Dialectica* VIII.4.3)

d. An apprehensive notion is that by which one is aware of something, whether absolutely or comparatively, but not judging something through it. At any rate it is not required that one judges. For example, John states in my presence thus: ‘The Pope is sleeping’. I conceive the Pope to be sleeping without judging that he is sleeping or judging that he is not. (David Cranston, *Tractatus Noticiarum Parvulis et Provectis Utilissimus*, 7ra)

Aquinas argues that assent is holding something to be true, and pertains to the results of composition and division. In the case of doubt we do not give an assent. The assent involved in knowledge is different from the assent involved in faith: in the former case, assent completes the search of knowledge; in the latter case, it does not complete cogitation in this way, but rather is voluntary (**a**; see e.g. Kenny 1993, 48–49; Niederbacher 2011, 343–344).

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Ockham distinguishes between the act of apprehension and the act of assent in knowledge and belief, although it may be difficult to separate them in practice (**b**). See also *Ordinatio*, prologus 1 (OTh 1, 16); for discussion, see McCord Adams 1987, vol. I, 497–501. The same ideas are found in Buridan (**c**) and many later authors (**d**); Cranston’s treatise (Paris, 1517) is quoted in Broadie 1989, 125. See Nuchelmans 1980, 93; Broadie 1989. On Averroes’ distinction between conceptualisation and assent, see Black 1999. On Avicenna on estimation, judgement, and assent, see Black 1993a; McGinnis 2008. For a more general discussion, see Tachau 1993.

4 Knowledge, Belief and Assent

a. Consider now whether someone believes if he does not want to, or whether he does not believe, if he wants to. This is absurd because believing is nothing but consenting to the truth of what is said. Furthermore, consent is a matter of will, and therefore faith is subject to authority. However, as the Apostle stated, there is no authority except from God [Romans 13:1]. (Augustine, *De spiritu et littera* 31.54)

b. Common conception of the soul is a statement that is accepted by anyone who hears it. There are two kinds of conception. One is common in that it is accepted by everyone: for example, if one suggests, ‘If you remove from even numbers even numbers, the ones that remain are even,’ no one who understands this denies it. However, others are accepted only by the educated. Such common conceptions of the soul include ‘The things that are incorporeal are not in a place’ and the like, which are approved of, not by the common people, but by the educated. (Boethius, *De hebdomadibus*, 40.18–27)

c. The intellect assents to an object in two ways. In one way, it assents to an object because it is moved by the object that is known in its own right, as is clear from the first principles with which intellect is concerned; or by the object that is known through something else, as is clear from the conclusions with which knowledge is concerned. In another way, the intellect assents to something, not because it is sufficiently moved by a proper object, but through some kind of choice, which is voluntarily inclined to one side rather than the other one. And if some such choice takes place with dubitation or fear that the other side might hold, it will be a belief. However, if it occurs with certitude without such a fear, it will be faith. (Thomas Aquinas, *Summa theologiae* II-2.1.4c)

d. A proposition is believed when it is assented to, and in this way we believe what we know as well as what we formally opine. (Robert Holcot, *In quatuor libros sententiarum quaestiones* I.1.6)

e. One type of human evidence is such that on the basis of it, the cognitive power is determined either by its own nature or by some evident argument to assent to a truth or a true proposition that cannot be falsified by any power. However, this is not required for natural science. Another type is such that on the basis of it, the cognitive power is determined either by its own nature [or by some evident argument] to assent to a truth or a true proposition that cannot be falsified naturally, albeit it could be falsified supernaturally. And this is required for natural science. (John Buridan, *Summulae de Dialecticae* VIII.4.4)

f. Evident assent is an assent which is true, naturally caused, and without hesitation, whether or not the intellect can be deceived in thus assenting. For example, the assent by which I judge that Castle is writing is evident to me. However, in thus assenting I can be deceived, because God can now destroy him while preserving his accidents where they are. When this has been done I shall judge as before, and in consequence will be deceived ... Non-evident assent is an assent which is certain, without hesitation, purely freely caused, such as ‘God is three and one’. It cannot be caused in the human intellect without a command of the will. And every such assent is called an assent of faith. Augustine states along these lines: ‘No one can believe without willing’. (David Cranston, *Tractatus Noticiarum Parvulis et Provecis Utilissimus*, (2va–b))

Augustine is concerned here with religious faith. His point is that faith is dependent upon the will, which is subject to God (a). Faith arises from ‘hearing’ what God says. This evidence is different from the evidence provided by the senses and the understanding. See also *De civitate Dei* XI.3, *De trinitate* XIII.2.5. Augustine’s notion that faith involves an act of the will was very influential in medieval discussions; see, for example (c).

Assent can be given with different degrees of conviction. The degree of conviction is determined by the evidence one has. The most powerful evidence is self-evidence. The first example given by Boethius is supposed to be of this type (b). In his commentary on this passage, Aquinas gives another example: ‘Every whole is greater than its part.’ Furthermore, he states that Boethius’ second example is not accepted by the common people, because they are unable to transcend imagination which is only concerned with corporeal objects. By contrast, wise people are capable of understanding the statement because they immediately remove the corporeal properties from incorporeal objects; see *Expositio super De hebdomadibus* 16–18. Aquinas refers to self-evident statements as *per se nota*. For the discussion of Boethius’ common conceptions of the soul and of *per se nota*, see Aertsen 1993, 714–715; 1998, 179–180.

Aquinas distinguishes between two types of assent: one that is determined by the object known or by the conclusion drawn, and the other that is dependent upon a choice (cf. 3a). He associates the former assent with knowledge,

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and the latter with belief and religious faith (c). This implies that he takes knowledge to be independent of belief. Thus he does not accept the principle that knowledge implies a belief. Robert Grosseteste (*Commentarius in Posteriorum Analyticorum libros* 11.19 (285.172–177)) had also rejected this principle; see Boh 1993, 28. By contrast, the principle was assumed by some other medieval authors such as William of Ockham (*Expositio In libros Physicorum Aristotelis*, prologus 2 (OPh 4, 5.29–6.50)) and Robert Holcot (d), and it became an integral part of the epistemic logic.

John Buridan discussed a skeptical challenge: does the possibility of an omnipotent deceiver deprive us of all knowledge about natural world? His answer was negative: the skeptic's claim for evidence is too strong. In support, Buridan distinguished between two types of evidence for an assent to a truth or a true proposition: one that rules out the possibility of an omnipotent deceiver, and another one that admits it, but only in the supernatural order of things (e). Buridan's point was that the skeptic asks us evidence in the former sense, while all we need for knowledge of natural world is evidence in the latter sense (see Klima 2009, 204–206; for certitude in Buridan). In either case, evidence is taken to determine the assent, and this type of assent is to be contrasted with an assent of faith. The distinction between naturally caused assent and freely caused assent was also made by some later authors, including David Cranston (f). Cranston assumes that the assent to the judgement 'Castle is writing' is evident because it is firmly based on sense perception regarding a person who is writing. The judgement may be mistaken, but it happens only under exceptional circumstances when, for example, God intervenes and destroys the individual while preserving its perceptible accidents. The texts from Cranston (Paris, 1517) are quoted in Broadie 1989, 150–151 and 164.

5 Reasoning

a. I respond that the reason and the intellect cannot be distinct capacities in humans. This will be clearly understood if their respective acts are considered. For to understand is simply to apprehend an intelligible truth, whereas to reason is to proceed from one thing understood to another, so as to learn an intelligible truth. Therefore angels, who according to their nature have perfect knowledge of the intelligible truth, have no need to proceed from one thing to another, but apprehend the truth simply and without discussion, as Dionysius states in *De Divinis Nominibus*, Chapter 7. However, human beings come to know an intelligible truth by

proceeding from one thing to another, and are thus called rational. Hence, it is clear that reasoning is compared to understanding, as movement is to rest, or acquisition to possession, of which one is characteristic of the perfect, the other of the imperfect. Furthermore, since movement always proceeds from something immovable, and results in something at rest, it follows that human reasoning, by way of inquiry and discovery, proceeds from certain objects which are simply understood (in other words, the first principles), and again, by way of judgement returns by analysis to the first principles, in light of which it examines what has been discovered. Given that, it is clear that rest and movement are not to be related to different capacities, but to one and the same, even in natural things, because an object is moved by the same nature towards a certain place, and it rests in that place. All the more so do we understand and reason by the same capacity. Thus it is clear that in man, reason and intellect are the same capacity. (Thomas Aquinas, *Summa Theologiae* I.79.8c)

b. I set about, God willing, to compile a small treatise on the pure art of logic so that the youth may be trained and quickly give counterarguments when they discuss any problem. This booklet will consist of four parts. The first part will give certain common rules which are used in the subsequent chapters, while the second part will concern the art of sophistry and the third one the art of exercise. The fourth part briefly and succinctly raises certain questions regarding the art of demonstration. (Walter Burley, *De puritate artis logicae tractatus brevior* I.1 (199))

c. And therefore it must be conceded that in virtue of his intellect, man naturally desires to know, and is inclined to assent to the truths of the first principles, and to the truths of the conclusions on the basis of a mediating understanding of those principles. (John Buridan, *In Metaphysicen* I.5 (6ra))

d. There are also some universal principles which the intellect concedes on the basis of what is experienced in many similar singular cases on account of its natural inclination towards the truth, such as, ‘Every fire is hot.’ (John Buridan, *In Metaphysicen* II.2 (9vb))

Aquinas examines the question of whether the reason is the same capacity as the intellect. His conclusion is that they are the same capacity, but their mode of operation is different (**a**; see also Kenny 1993, 55–56). The reasoning of the human intellect takes place discursively and takes time; this was regarded as its main difference from higher intelligences in medieval thought. While reasoning was taken as a natural faculty of the intellect, it could be improved by logical training. Numerous logical treatises were written for learning the rules of reasoning (**b**; for Burley’s logic and epistemology, see Conti (ed.) 2013). According to Buridan, the intellect is naturally inclined to assent to the principles of

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logic (**c**; for discussion, see Krieger 2001). This was a standard medieval view. Buridan also taught that because of its natural inclination toward truth, the intellect also tends to accept inductive generalizations (**d**). By ‘natural inclination’, Buridan does not mean that people have an innate capacity for assent, or that they acquire it by learning. The point is rather that the intellect gives its assent with the assistance of the senses, memory, or experience (*Summulae de Dialectica* VIII.5.4; see also Klima 2009, 197).

Chapter 22

Early Modern Theories of Judgement and Propositional Operations

Tuomo Aho

Early modern psychology of propositions and judgements rested upon the traditional doctrine of combining and dividing non-complex items. This ancient way of thinking was still commonly followed both in scholastically-minded philosophy and in later currents, though there were some terminological changes, like the increased use of the word ‘idea’ for what is combined and divided. The distinction between apprehensive composition and assertoric judgement act was also discussed by many authors. In the authoritative Port-Royal logic by Arnauld and Nicole, it was argued that the verb ‘to be’ in a proposition expresses the mental act of combining and at the same time signifies judgement and assertion (1).

Many authors, however, distanced themselves from the standard view. Hobbes and Berkeley interpreted the operations of combining and dividing as concerning words rather than ideas: they took simple judgements to express that two terms of the language are applicable to one object. Leibniz, on the other hand, concluded from his *in esse* principle that the perfect concept of the subject term entails all predicates which can be truly affirmed of it; hence judgements are statements of inclusion between the conceptual contents. An act of judging is like insight, seeing conceptual relations, rather than operating with separate ideas. Descartes admitted that the mind may combine ideas, but since he extended the notion of an idea to cover even the contents of propositions, intellectual apprehension and judgement were no longer closely connected just to combination and division as something fundamentally different from simple ideas. The tendency to identify judgements and ideas was then carried on by the empiricists. Hume associated judgements with habitual connections between sensory ideas, such as resemblance, contiguity or causality. French sensationalists developed some analogous views (2).

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Descartes suggested that the acts of judgement belong to the will. In his view, the mind is passive in receiving ideas, whether simple or propositional, but it is active in affirming or denying them. The acts of the intellect are passive, whereas the active acts belong to the will. Moreover, because the will is absolutely free for Descartes, judgement is also free. This view found some Cartesian supporters, but was soon generally rejected. Instead of the will, it was more usual to see the psychological origin of judgmental acts in an intellectual faculty and its modes of action, as Locke did. Later empiricists regarded the generation of judgement as a result of connections or features of sensory ideas. The most famous example is Hume's account which explains the assent of judgements as a special feeling of the vivacity of representations. This opinion was also severely criticized (3).

The sceptical observations about wavering beliefs and the Cartesian ideal of perfect evidence are connected to the question of the degrees of belief. This became a subject of more systematic inquiry during the seventeenth century, when Catholic theologians debated on the probability of opinions. Among the empiricists, Locke was well aware of degrees of belief. Also, when mathematical probability theory developed, it was often associated with degrees of rational belief; this connection was formulated expressly in the concept of the so-called subjective probability in the eighteenth century (4).

When reasoning or inference was considered from a psychological rather than purely logical point of view, one obvious question was the relation between the natural faculty to make inferences and the formal logical theory. Opinions differed: some authors saw the logical theory as the crystallized form of natural inferences, while others thought that it was of no use. The description of the event of reasoning itself interested mainly the empiricist philosophers. A well-known suggestion was that inferences happen by means of an ordered chain of ideas. Critics did not accept this: for Hume, reasoning rests on habitual association, whereas Reid took the faculty of inference to be unanalysable (5).

One particular theory of reasoning was the hypothesis that all inferences are basically computation processes. Hobbes used such a thought in his model of infering as an operation with names. Later, Leibniz developed the idea further, when he constructed the model where inferences are complex calculations that start from analytical definitions of concepts (6).

1 Conjoining and Dividing Ideas

a. According to the order of nature, one should first deal with simple terms and then with composition, for the operations of the mind are commonly counted up as follows: the apprehension of simple things, composition and division, and judgement. In fact, human beings would hardly differ from animals at all if they merely apprehended simple things and had no light for connecting simple things, reasoning, and judgement. (Melanchthon, *Erotemata dialectices II: De propositione* (577))

b. Just as some concepts are true or false, and others are not, in the same way certain words contain truth or falsity, and others contain neither. [Aristotle] teaches that there is truth or falsity in those concepts in which composition or division is discernible.

By the name of composition he means an affirming proposition, that is, a proposition in which something is attributed to something, like ‘A man is an animal’. By the name of division he means a denying proposition, in which something is separated from something, like ‘A man is not a beast’. (*Commentarii Collegii Conimbricensis in universam dialecticam Aristotelis*, De interpretatione 1.1 (5))

c. It should be noticed that the composition in a particular operation of intellect is fourfold, i.e., formal, virtual, objective, and suppositional. The composition is formal when the operation includes several distinct concepts, and it is virtual when it is formally one act but is equivalent to many with respect to various objects to which it is directed. The objective composition is always connected to the virtual composition, and it occurs when the objective concepts which are composed by the intellect are many. The composition is suppositional when the simple act of the intellect presupposes many antecedent acts with respect to an intended object. (*Commentarii Collegii Conimbricensis in universam dialecticam Aristotelis*, De interpretatione 4.3 (109))

d. Judgement is an assent of the intellect to something to which such a judgement can be applied; but such a judgement can be applied to nothing but a complex truth signified by an enunciation; therefore, the judicative act is different from the formation of an enunciation. (John of St. Thomas, *Cursus philosophicus thomisticus* 1.5.1 (59))

e. One has to distinguish between two concepts of the copula, one which takes it *in actu signato* and the other which takes it *in actu exercito*. The concept of the copula *in actu signato* is that by which a conjunction between two different things is apprehended as such, for when something can be known as a being, it can be perceived by the intellect; the concept of the copula *in actu exercito* is what represents the conjunction as actually binding a predicate to a subject, and the same holds about disjunction. The former concept, even though it is in mind, does not combine other things and does not constitute enuntiations with them. The latter concept never occurs without a judgement ... (*Commentarii Collegii Conimbricensis in universam dialecticam Aristotelis*, De interpretatione 4.1 (104))

f. Once we have formed ideas of things, we compare the ideas to each other. Finding that some ideas belong together, and others do not, we unite or separate them. This is called *affirming* or *denying*, and generally, *judging*.

This judgement is also called a *proposition*, and it is easy to see that it must have two terms: one term of which something is affirmed or denied is called the *subject*, and the other term which is affirmed or denied is called the *attribute* or *predicate*.

It is not enough to conceive the two terms, but the mind must also unite or separate them. This action of our mind is expressed in speech by the word ‘is’, either alone when we affirm or with a negative particle when we deny. Thus, when I say ‘God is just’, ‘God’ is the subject of this proposition, and ‘just’ is the attribute. The word ‘is’ indicates the action of my mind which affirms, in other words, which joins the two ideas of *God* and *just* as belonging together. If I say ‘God is not unjust’, ‘is’ together with the particle ‘not’ signifies the action that is contrary to affirming: the action of denying, by which I regard these ideas as mutually repugnant, because the idea of *unjust* contains something that is contrary to what is contained in the idea of *God*. (Arnauld and Nicole, *La logique ou l’art de penser* II.3)

g. We must, I say, observe two sorts of Propositions, that we are capable of making: – *First, Mental*, wherein the *Ideas* in our Understandings are without the use of Words *put together, or separated* by the Mind, perceiving, or judging of their Agreement, or Disagreement. *Secondly, Verbal Propositions*, which are Words the signs of our *Ideas put together or separated in affirmative or negative Sentences*. ... Every one's Experience will satisfie him, that the Mind, either by perceiving or supposing the Agreement or Disagreement of any of its *Ideas*, does tacitly within it self put them into a kind of Proposition affirmative or negative, which I have endeavoured to express by the terms *Putting together* and *Separating*. But this Action of the Mind, which is so familiar to every thinking and reasoning Man, is easier to be conceived by reflecting on what passes in us, when we affirm or deny, than to be explained by Words. (Locke, *An Essay concerning Human Understanding* IV.4.5–6)

In addition to the formation of simple concepts, the combining and dividing of intelligible units were also traditionally counted among the basic operations of the mind. This was how judgements were often explained, and Melancthon took it as the standard view of judgements (a). Sixteenth-century authors elaborated upon this assumption in their discussions about 'complex thoughts' (cf. Zabarella, *De natura logicae* II.5), and it is clearly expressed in terms of conjoining and dividing in the influential Jesuit Coimbra commentary on Aristotle's logic (b). This treatise applies the notions of composition and division both to mental operations and to the resulting propositions, and it includes also a long discussion of how the operations of the intellect are compositional (c). Many authors discussed the difference between mere apprehensive composition of ideas and assertoric judgement, and one solution was to distinguish between them by saying that a judgment adds assertion to an apprehensive proposition. Such a distinction between apprehensive and judicative acts was particularly stressed by John of St. Thomas in his Thomistic textbook (d). See also Suárez, *De anima* V.6, n. 6 and 7, and *Disputationes metaphysicae* IX.2.4. Some authors referred to this difference with the medieval distinction between *actus signatus* and *actus exercitus* as regards the copula, which could be taken to signify either an apprehended union between things without an assent or union with an assent and judgement (e). Concerning the role of the copula, see also Capozzi and Roncaglia 2009, 86, 92–95.

The doctrine about combination of elements became generally customary in logic texts. 'For producing a *proposition*, the combination of a noun and a verb is both absolutely *necessary* and altogether *sufficient*, since without these two can no proposition be accomplished, and nothing is required in addition' (Sanderson, *Logicae artis compendium* II.1.4). While Descartes made a clear distinction between having an intellectual representation and

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assenting to it (see **3**), the logic of Arnauld and Nicole taught that the mental combining of ideas involves affirming the composite and the mental dividing involves denying it; such an act is called a judgement or a proposition. These terms can equally stand for the result of the act, a declarative sentence (**f**). ‘Words are needed to indicate the objects of our thoughts, but also to indicate affirmation, which is the principal manner of our thought. Exactly this is done by what we call a *verb*. It is nothing but *a word whose principal function is to signify affirmation* – that is to say, to indicate that the sentence where it occurs is a sentence of somebody who not only conceives certain things but who judges concerning them and makes an affirmation ... We can say that the verb in itself has no other function but to indicate the connection we make in our minds between the two terms of a proposition’ (*La logique ou l’art de penser* II.2). See Dominicy 1984 ch. 4. There are resemblances between the psychology of judgement in the Port-Royal logic and in Locke (**g**); see van der Schaar 2008. Concerning the tradition of ‘general grammar’, see Rosiello 1967, ch. 2; on its view of mental syntax, see Seuren 1998, 40–48, 70–74.

Some scholars felt it important to underscore that the definition of a mental proposition as a composition or division can be no more than a metaphorical illustration. Geulincx wrote: ‘Also they make fools of themselves who seek here to offer definitions of these acts; for what is completely seen in itself without defining allows no definition. True, you can offer as definitions: “affirmation is a proposition that conjoins parts; negation one that separates and divides.” But I ask: do they truly and properly separate and conjoin parts? No, but that is a trope, a metaphor, a comparison’ (*Logica fundamentis suis restituta* IV.1.6 (405)). However, the formula of conjoining and separating two ideas was well established in textbooks. Moreover, the Port-Royal logic adopted the old opinion that the combination of ideas can always be indicated simply by the verb ‘is’ or ‘is not’, that is, by a positive or negative copula, if the predicate is interpreted suitably (**f**). This uniform analysis ‘A is (is not) B’ remained prevailing for a long time (for a clear example, see Wolff, *Philosophia rationalis sive logica* § 199–203). However, some eighteenth-century French grammarians objected to it, arguing that a judgement can consist of two basically different elements, one functioning like a noun and the other like a verb. This thesis has psychological relevance because it implies that there must be ideas of two different types. See Beauzée, *Grammaire générale* III.1; Graffi 2001, 17–18, 73–76. Some logicians also pointed out that, for example, relational judgements require a more complex analysis. (See, e.g., Tetens, *Philosophische Versuche über die menschliche Natur und ihre Entwicklung* I, IV.7.6.)

2 Alternatives to Conjoining and Dividing

a. A NAME OR APPELLATION therefore is the voice of a man, arbitrarily imposed, for a mark to bring to his mind some conception concerning the thing on which it [the mark] is imposed ... Of two appellations, by the help of this little verb IS, or something equivalent, we make an AFFIRMATION OR NEGATION, either of which in the Schools we call also a proposition, and consisteth of two appellations joined together by the said verb is. (Hobbes, *The Elements of Law: Human Nature* 5.2; 5.9)

b. With the proposition 'A man is an animal' we have only one idea, though that idea is first considered as that for which the object is called man, and next that for which it is called an animal. (Hobbes, *De corpore* I.5.9)

c. Suppose I have the idea of some particular dog to which I give the name Melampus and then frame this proposition Melampus is an animal, where 'tis evident the name Melampus denotes one particular idea ... Nor does it [the word 'animal'] indeed in that proposition stand for any idea at all. All that I intend to signify thereby being only this, that the particular thing I call Melampus has a right to be called by the name animal ... I perceive it evidently in my self that upon laying aside all thought of the words 'Melampus is an animal' I have remaining in my mind one only naked and bare idea viz. that particular one to which I give the name Melampus. (Berkeley, *First Draft of the Introduction to the Principles* [19])

d. An affirmation is true if its predicate is in its subject; thus, in every true affirmative proposition, whether necessary or contingent, universal or singular, the notion of the predicate is somehow contained in the notion of the subject, in such a way that anyone who understood the two notions perfectly, as GOD understands them, would *eo ipso* perceive that the predicate is in the subject. (*Opuscules et fragments inédits de Leibniz*, ed. Couturat (16–17))

e. The predicate or the consequent is always in the subject or the antecedent, and exactly in this consists the nature of truth in general or the connection between the terms of a sentence, as also Aristotle observed. And this connection and the inclusion of the predicate in the subject is explicit in identities, but in all others it is implicit and has to be shown by an analysis of notions, which constitutes an *a priori* demonstration. (*Opuscules et fragments inédits de Leibniz*, ed. Couturat (518–519))

f. For the fact that they [ideas] are expressed by names or by propositions is not what makes them belong to the mind or the imagination; they can both be expressed in either way. It is the manner of conceiving them which makes the difference here: thus whatever we conceive of without an image is an idea of the pure mind, and whatever we conceive of with an image is an idea of the imagination. (Descartes, Letter to Mersenne, July 1641, AT III, 395)

g. 'Tis impossible the same simple ideas should fall regularly into complex ones (as they commonly do) without some bond of union among them, some associating quality, by which one idea naturally introduces another. This uniting principle among ideas is not to be consider'd as an inseparable connexion; for that has already been

excluded from imagination: nor yet are we to conclude, that without it the mind cannot join two ideas; for nothing is more free than that faculty: but we are only to regard it as a gentle force, which commonly prevails ... The qualities, from which this association arises, and by which the mind is after this manner convey'd from one idea to another, are three, *viz.* RESEMBLANCE, CONTIGUITY in time or place, and CAUSE and EFFECT. (Hume, *A Treatise of Human Nature* I, I.4 (10–11))

h. Comparing is nothing but giving attention to two ideas simultaneously ... As soon as there is comparison there is judgement ... A judgement is thus nothing but the perception of a relation between two ideas which are compared. As far as the comparisons and the judgements are repeated, [this happens] more and more easily. Thus there develops a habitude to compare and judge. (Condillac, *Traité des sensations* I.2.14–16)

Some philosophers deviate from the model of conjoining and dividing ideas. Thus Hobbes, as a radical nominalist, holds that forming a simple affirmative proposition presupposes only one idea, a particular and concrete image to which two terms are applied (**a**, **b**). A judgement announces that two descriptions designate one and the same object. (Strictly speaking, judgements must be language-bound; cf. *Leviathan* I.4.) Similar considerations can also be found in Berkeley, even though his metaphysical views were very different (**c**). See Nuchelmans 1983, ch. 7 and 8.2.

According to Leibniz's famous *inesse* principle, the truth of a proposition means that the concept of the predicate is included in the concept of the subject (**d**). See also Leibniz, Letter to Arnauld, 14 July 1686 (Gerhardt II, 56). The full explication of the subject is infinitely long, but true propositions are partial analyses of it (**e**). He points out that mere combination of ideas does not suffice for propositions: 'the wise man' involves joining of ideas but is not a proposition, like 'a man is wise' (*Nouveaux essais* IV.5.2). Understanding is based on an insight of the inclusion relation between the two concepts. Thus, true affirmative judgements reflect the fundamental order of ideas. See also *Dialogus de connexion inter res et verba et veritatis realitate*, Gerhardt VII, 190–191, and *Meditationes de cognitione, veritate et ideis*, Gerhardt IV, 425–426; Mates 1986, ch. 5.

The Leibnizian view of inclusion between concepts survives in the Wolffian tradition, though without the backbone of logical realism. 'If somebody compares two concepts and thereby sees that one idea is consonant with the other or contradicts it: then the man judges. A judgement (Judicium) is thus the insight of consonance or contradiction between two concepts ... For as soon as we see by comparison that the idea of the predicate is somehow included in the idea of the subject, then we must think in or by the subject also of the predicate, and so join them together, i.e., affirm one of the

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other.’ (Reimarus, *Vernunftlehre* § 115, 117) See also Capozzi and Roncaglia 2009, 129–142, on proposals for expressing conceptual relations.

Descartes draws a distinction between two main kinds of thoughts by distinguishing between ideas of imagination and ideas of reason. Both kinds include ideas that can be expressed by terms and ideas that can be expressed by propositions, and so he took this distinction as a mainly formal logical one (**f**). He does speak about conjoining ideas (*Meditationes*, AT VII, 152), but his view of propositional ideas implies that such combining does not yet amount to judgement. In this respect he was not followed in the logic of Arnauld and Nicole, who continued to stress the basic difference between ideas and judgements, between terms and propositions (*La logique* I.1). On the other hand, Spinoza went even further than Descartes in identifying affirmations completely with other ideas (see *Ethica* II.49).

Hume observes the old principle of conjoining: ‘As all simple ideas may be separated by the imagination, and may be united again in what form it pleases ...’ (*Treatise* I.4 (10)). But he also points out that a judgement, for example, ‘God is’ (94), does not necessarily require several conjoined ideas. Hume emphasizes the role of habitual association in forming judgements. His opinion is extreme in that he wants to accept only a few elementary grounds for the association of ideas (**g**). The affirmation of an idea is a special feeling or sentiment which can accompany simple and complex ideas equally well. For Hume’s view of assent, see **3** below. Condillac, then, explains a judgement as a perceptual awareness of a relation between two ideas; ideas always appear in a network, and judgements represent awareness of these comparisons. (See Coski 2003; Thomas 2003.) Judgements become habitual when repeated (**h**). They gain precise content only in a linguistic form. ‘We can be mistaken only in using complex notions, either by wrongly adding or subtracting something. But if the complex notions are formed with the great care I prescribe, mistakes can be avoided by retracing their generation, seeing thereby what they contain, and neither more nor less. That being so, whatever comparisons we make of simple and complex ideas, we shall never attribute to them other relations than those that belong to them’ (Condillac, *Essai sur l’origine des connaissances humaines* II.2.31). See Nuchelmans 1983, ch. 9.

3 The Origin of Judgement Acts

a. And for judging, the intellect is required, because we can make no judgement about a thing which we in no way perceive; but the will is also required, in order to give assent to the thing which has been perceived in some way. However, a complete and comprehensive perception of the thing is not required, at least not for all

judging whatsoever, for we can assent to many things which we know only very obscurely and confusedly.

Indeed the perception of the intellect extends only to those few things which are presented to it, and it is always very finite. But the will can in a certain sense be said to be infinite, since we never notice anything which could be the object of some other will, or of that boundless will which is in God, to which even our will could not extend itself. (Descartes, *Principia philosophiae* I.34–35, AT VIII, 18; cf. *Meditationes* IV, AT VII, 58)

b. If, however, I abstain from making any judgement, when I do not perceive what is true with sufficient clarity and distinctness, then it is clear that I act correctly and make no error. But if I do either affirm or deny, then I am not using the liberty of my will correctly. (Descartes, *Meditationes de prima philosophia* IV, AT VII, 59. See also Letter to Hyperaspistes, August 1641, § 11, AT III, 432.)

c. When I saw that over and above perception, which is a prerequisite for judging, there has to be affirmation or negation to constitute the form of the judgement, and that we are often free to withhold our assent even if we perceive the subject-matter, I therefore assigned the act of judging itself, which consists in nothing but assent, that is, in affirmation or denial, to the determination of the will, rather than to the perception of the intellect. (Descartes, *Notae in programma*, AT VIII, 363)

d. I reply to the second objection by denying that we have a free power to suspend judgement. For when we say that someone suspends judgement, we simply say that he sees that he does not perceive a thing adequately. Suspension of judgement, therefore, is really perception, and not free will. (Spinoza, *Ethica* II.49 scholium, ad 2)

e. As Knowledge, is no more arbitrary than Perception: so, I think, Assent is no more in our Power than Knowledge. When the Agreement of any two *Ideas* appears to our Minds, whether immediately, or by the Assistance of Reason, I can no more refuse to perceive, no more avoid knowing it, than I can avoid seeing those Objects, which I turn my Eyes to, and look on in day-light: And what upon full Examination I find the most probable, I cannot deny my Assent to. But though we cannot hinder our Knowledge, where the Agreement is once perceived; nor our Assent, where the Probability manifestly appears upon due Consideration of all the Measures of it: Yet *we can hinder both Knowledge and Assent, by stopping our Enquiry*, and not employing our Faculties in the search of any Truth. (Locke, *An Essay concerning Human Understanding* IV.20.16)

f. When you wou'd any way vary the idea of a particular object, you can only encrease or diminish its force and vivacity ... As belief does nothing but vary the manner, in which we conceive any object, it can only bestow on our ideas an additional force and vivacity. An opinion, therefore, or belief may be most accurately defin'd, A LIVELY IDEA RELATED TO OR ASSOCIATED WITH A PRESENT IMPRESSION. (Hume, *A Treatise of Human Nature* I, III.7 (96), cf. Appendix (629))

g. It is evident, that belief consists not in the peculiar nature or order of ideas, but in the *manner* of their conception, and in their *feeling* to the mind. (Hume, *An Enquiry concerning Human Understanding* 5.2)

h. I cannot help thinking, that never anything more absurd was gravely maintained by any Philosopher, than this account of the nature of belief ... The belief of a proposition is an operation of mind of which every man is conscious, and what it is he understands perfectly, though, on account of its simplicity, he cannot give a logical definition of it. If he compares it with strength or vivacity of his ideas, or with any modification of ideas, they are so far from appearing one and the same, that they have not the least similitude. That a strong belief and a weak belief differ only in degree, I can easily comprehend; but that belief and no belief should differ only in degree, no man can believe who understands what he speaks: For this is in reality to say that something and nothing differ only in degree. (Reid, *Essays on the Intellectual Powers of Man* III.7 (353))

The usual medieval doctrine was that intellectual operations are voluntary, but the assent to and dissent from propositions were not regarded as free acts of will. Descartes's novel suggestion, perhaps with Stoic inspiration, was to deviate from this and emphasize the voluntariness of judgements. Occasionally he seems to claim that the will indeed can freely choose the contents of the judgements that it accepts (**a**). Compare also Letter to Mesland (?), 9 February 1645, AT IV, 173–174. In most places his thesis appears to be more moderate: the will can always withhold judgement and freely refrain from decision about assent or dissent, perhaps in spite of evidence (**b**, **c**). Concerning Descartes's 'doxastic voluntarism', see Newman 2008; Alanen 2009.

Even Cartesians soon distanced themselves from Descartes's original position, though it was still supported by a few authors, most notably by Malebranche. See his *La recherche de la vérité* I.2, 2 and 4: 'We should never give full assent to propositions ... unless we clearly know that ill use would be made of our freedom if we would not will to consent'. It became a common view that judgement is independent of the will. Spinoza argued that even the assumption of the free suspension of belief is false (**d**). Locke had no sympathy for voluntary judgements (**e**). According to him, there are two natural faculties for judging: one for evident judgements, and another for more or less probable judgements. 'The Faculty, which God has given Man to supply the want of clear and certain Knowledge in Cases where that cannot be had, is *Judgment*: whereby the Mind takes its *Ideas* to agree, or disagree; or which is the same, any Proposition to be true, or false, without perceiving a demonstrative Evidence in the Proofs ... The Mind has two Faculties, conversant about Truth and Falshood. *First, Knowledge*, whereby it certainly perceives, and is undoubtedly satisfied of the Agreement or Disagreement of any *Ideas*. *Secondly, Judgment*, which is the putting *Ideas* together, or separating them from one another in the Mind, when their certain Agreement or Disagreement is not perceived, but *presumed* to be so' (Locke, *An Essay concerning Human*

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Understanding IV.14.3–4). Thus judgements are acts of a special faculty that operates on ideas. Some others had suggested that in a judgement one sensory idea simply causes another, cf. Hobbes, *De corpore* 3.3. Also some eighteenth-century authors underlined the causal necessity of judgements: ‘It follows from our theory that when the soul perceives an object distinctly and clearly, it is forced by the very evidence of its sensations to consent to the truths that strike it so vividly; and to this passive approval we have given the name of judgement. I say *passive* in order to make clear that it does not stem from any action of the will, as Descartes says’ (La Mettrie, *Traité de l’ame* 13.6 (178)).

Because Descartes assigned judgement to the will, it was imperative for him to separate the judgement act from the apprehension of a propositional content without judgement. Outside such a voluntarist theory, this traditional distinction was no longer as urgent, and those who mentioned it did not always see two acts in it. (See 1 above.) In many texts, the forming of a proposition and affirming it are simply identified. ‘To join or separate terms is affirming one of the other or denying one of the other, like: God is eternal, man is not eternal’ (Bossuet, *De la connaissance de Dieu* I.13). For counter-examples to this tendency, see Reid, *Essays on the Intellectual Powers of Man* IV.3 (395) and VI.1 (497–500). The view of a judgement as a mere idea reached its pinnacle in the later phase of British empiricism. Hume argued that judgement or belief cannot consist in adding anything to the idea, because that would amount to a new idea; it must simply mean that the idea is present in a particular manner (**f, g**). ‘But as ’tis certain there is a great difference betwixt the simple conception of the existence of an object, and the belief of it, and as this difference lies not in the parts or composition of the idea, which we conceive; it follows, that it must lie in the *manner*, in which we conceive it’ (*A Treatise of Human Nature* (94–95)). This mode is called ‘vivacity’, without further explanation. ‘Thus it appears that *belief* or *assent*, which always attends the memory and senses, is nothing but the vivacity of those perceptions they present; and that this alone distinguishes them from imagination. To believe is in this case to feel an immediate impression of the senses, or a repetition of that impression in the memory. ’Tis merely the force and liveliness of the perception, which constitutes the first act of the judgment ...’ (*Treatise* I, III.5 (86)). Cf. p. 237 above. Concerning the feelings of assent and dissent, see also Hartley, *Observations on Man* I, prop. 12. See Owen 2003.

The Humean account of judgements was vehemently criticized by Reid, who argued that the difference between a judgement and a simple idea cannot be a matter of degree (**h**). See the whole chapter III.7 of Reid’s *Essays on the Intellectual Powers of Man*, as well as his realist criticism of the ambiguous epistemological principle that judgements are ‘about’ ideas and sensations

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(ibid. VI.3). ‘Mr Hume made the last step in this progress, and crowned the system by what he calls his *hypothesis*, to wit, That belief is more properly an act of the sensitive than of the cogitative part of our nature. Beyond this I think no man can go in this track; sensation or feeling is all, and what is left to the cogitative part of our nature, I am not able to comprehend’ (*Essays on the Active Powers of Man* V.7 (468–469)). Reid even suggests that a propositional thought does not need any association or manipulation of preceding ideas: ‘When I perceive a tree before me, my faculty of seeing gives me not only a notion of simple apprehension of the tree, but a belief of its existence ... and this judgment or belief is not got by comparing ideas, it is included in the very nature of the perception’ (*An Inquiry into the Human Mind*, conclusion, 4 (533)). See Nuchelmans 1983, ch. 10.1.

4 Degrees of Belief

a. Preachers know that the emotion which fills them when speaking animates them toward belief, and in anger we devote ourselves more to the defence of our opinion, imprinting it on ourselves and embracing it with greater vehemence and approval than if we were cool and calm. You simply recount a case to a lawyer, and he answers you wavering and doubting; you notice that it does not matter to him whether he should support this party or that one. Have you paid him enough for adhering to the case and taking his stand on it? Does he begin to be interested in it? Does it warm his will? His reason and his knowledge are alighted at once; now an obvious and indubitable truth appears to his understanding; he discerns it in a totally new light, believes it honestly and is thus persuaded of it. Perhaps the ardour which stems from danger and from annoyance and stubbornness against the pressure and power of the magistrate, or perhaps the search of reputation, have made such a man anxiously support an opinion for which he would not have raised a finger among his friends and at liberty. (Montaigne, *Apologie de Raimond Sebond* (549–550))

b. To this universal principle, which in fact turns out to be true, people join a minor principle in every particular case, which is false but useful in the human condition, by an order of nature itself: ‘This time it happens or will happen in the way that it usually happens (or will happen), and not in the way that it rarely happens (or will happen).’ And the reason for such a prediction is that as soon as we know that a thing belongs to one of two sets which differ in number, our intellect naturally supposes that it is in the more numerous set. This is the foundation of all the benefits and all the errors which can happen in games and other uncertain bets. And in summary, this is the sole basis of probability, which Aristotle in several places defines just as what happens most often. (Sforza Pallavicino, *Del bene libri quattro* II.34 (467b))

c. Obviously that [outcome] which has more of adequate preventing causes (which are all mutually indifferent [that is, equiprobable] with respect to preventing or not preventing) is more likely to be prevented than that which has fewer such preventing causes. Because every cause which is equally likely to prevent (or not prevent) something, for example, a shipwreck, gives by itself a certain probability to the prevention of the sinking and justifies a certain hope that it is prevented. It thus justifies this judgement: 'Perhaps it is prevented.' So if a new, similar, potentially-preventing cause is added to these causes, then the probability and the hope of the prevention grows: everything finite grows when it undergoes addition. Thus, the more there are of such preventing causes, the more probable the future prevention is, and the better it can be hoped. (Esparza, *Quaestiones disputandae de gratia* 5 (22–23))

d. Our Knowledge, as has been shewn, being very narrow, and we not happy enough to find certain Truth in every thing which we have occasion to consider; most of the Propositions we think, reason, discourse, nay act upon, are such, as we cannot have undoubted Knowledge of their Truth: yet some of them border so near upon Certainty, that we make no doubt at all about them; but *assent* to them as firmly, and act, according to that Assent, as resolutely, as if they were infallibly demonstrated, and that our Knowledge of them was perfect and certain. But there being degrees herein, from the very neighbourhood of Certainty and Demonstration, quite down to Improbability and Unlikelihood, even to the Confines of Impossibility; and also degrees of *Assent* from full *Assurance* and Confidence, quite down to *Conjecture*, *Doubt*, and *Distrust*. (Locke, *An Essay concerning Human Understanding* IV.15.2)

e. This only may be said in general, That as the Arguments and Proofs, *pro* and *con*, upon due Examination, nicely weighing every particular Circumstance, shall to any one appear, upon the whole matter, in a greater or less degree, to preponderate on either side, so they are fitted to produce in the Mind such different Entertainment, as we call *Belief*, *Conjecture*, *Guess*, *Doubt*, *Wavering*, *Distrust*, *Disbelief*, etc. (Locke, *An Essay concerning Human Understanding* IV.16.9)

f. The certainty of things, seen from our viewpoint, is not the same everywhere, but has manifold variation in greater and less ... *Probability* is the degree of certainty, and differs from it [certainty] as a part differs from the whole ... Something is *morally certain* whose probability nearly equals the whole certainty, so that the difference cannot be perceived; on the other hand, something is *morally impossible* which has only as much probability as moral certainty falls short of complete certainty. (Bernoulli, *Ars Conjectandi* 4.1 (239–240))

g. What is certain and indubitable is said to be *known* or *understood*; everything else is only *conjectured* or *believed*.

To *conjecture* something is to evaluate its probability; therefore our *conjecturing* or *stochastic art* is defined as the art of evaluating what will be the exact probability of things ... (Bernoulli, *Ars Conjectandi* 4.2 (241))

h. Prop. 3. The probability that two subsequent events will both happen is a ratio compounded of the probability of the 1st, and the probability of the 2nd on

supposition the 1st happens. (Bayes, 'An Essay towards solving a Problem in the Doctrine of Chances', 378)

i. Antecedently to all experience, it would be improbable as infinite to one, that any particular event, before-hand imagined, should follow the application of any one natural object to another; because there would be an equal chance for any one of an infinity of other events ... But if the same event had followed without interruption in any one or more subsequent experiments, then some degree of uniformity will be observed; reason will be given to expect the same success in further experiments, and the calculations directed by the solution of this problem may be made. (Bayes, 'An Essay towards solving a Problem in the Doctrine of Chances', 408–409)

An addition to the previously familiar views of propositional attitudes was provided by the rediscovery of ancient scepticism. (Sextus Empiricus was published in French in 1562.) The discussion about scepticism was mainly epistemological, dealing with the possibility of knowledge, but occasionally it included psychological observations on the instability of cognitive attitudes, such as Michel de Montaigne's remarks on how feelings influence belief **(a)**. In his 'method of doubt', Descartes also used sceptical arguments for withholding belief, but finally arrived at a class of indubitably evident beliefs.

Questions of estimating plausibility entered Catholic philosophy in connection with the so-called 'probabilism question', which aroused much debate in sixteenth- and seventeenth-century moral theology (Demant 1936; Kantola 1994). Jesuit scholars were particularly interested in issues about probability (Knebel 2000). By these scholars, it was stated that growing inductive evidence ought to increase the credibility of hypotheses, and that the opinion which agrees with what happens most frequently is naturally taken as probable **(b)**. (See Knebel 2001.) A view which emerged during the debate was that there are, in principle, arbitrarily many degrees of belief, and the credibility of a proposition is changeable with evidence and can be compared with that of others as greater and less (Knebel 2000, ch. 5) **(c)**. A Jesuit position which applied these results was the 'probabiliorism' of Tirso González, who permitted only the most probably blameless alternative in moral choices. On the non-scholastic side, Locke was well aware of the degrees in the certainty of propositions and, correspondingly, in assent to them. He also pointed out the need for an analysis of the propositional attitudes of these degrees **(d, e)**. Then, Hume discussed the mind's natural trust in induction (*Treatise* I, III.12 (134–137)). For the Scottish common sense philosophy see Reid, *Essays on the Intellectual Power of Man* VII.3.

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The development of the mathematical theory of probability was accompanied by philosophical interest, in Leibniz and many others. (Concerning some important early stages of the mathematical concept of probability, see Hald 1990, ch. 3.1, 5.4, 15.7, 16.1.) Jakob Bernoulli formulated the idea that probability should express the ‘degree (*gradus*) of certainty’ of the event in question. This is a degree of rational belief, and it has often been expressed as a betting ratio. In this way, Bernoulli inspired the later theory of subjective probability. He retained the widely-used notion of moral certainty and gave it a definition (**f**, **g**). (See van der Waerden 1975, 12–17.) Later, Thomas Bayes began the study of conditional probabilities and stated some fundamental rules for them (**h**, **i**). Richard Price, in his introduction to Bayes’s text, says that Bayes has captured something of probability ‘which all will allow to be its proper measure in every case where the word is used’ (375). On the contents of Bayes’s results, see Dale 1995, 31–49, and Earman 1992, ch. 1; on philosophical interpretations of probability in the eighteenth century, see Daston 1988, ch. 4.2 and 6.4.

5 The Psychology of the Reasoning Act

a. It is to be known that logic is of two kinds, natural and artificial. Natural logic is a kind of natural instinct and a power obtaining without any human endeavour, such that with it even completely unlearned people make syllogisms and reasonings without any idea of the art of argumentation. Old sages used this natural logic in philosophising; before any art of logic was written or taught, they were guided by this natural instinct when they used some method to contemplate things, and progressed from determined principles to new results. And later philosophers, reading their texts, evaluated them not only philosophically but even logically, for, when they pondered the reason and method of philosophising, they brought it under rules and art and composed the so-called artificial logic. (Zabarella, *De natura logicae* I.12 (27))

b. Some will perhaps wonder that at this place, where we are searching for ways of making ourselves more skilful at deducing some truths from others, we make no mention of any of the precepts of the dialecticians with which they suppose they govern human reason when they prescribe certain forms of reasoning ... But as we can notice, the truth often slips from these fetters, while those who employ them are themselves left entrapped in them. That does not happen so often to others, and experience shows that the cleverest sophisms can lead astray the sophists themselves, but hardly ever someone who makes use of his clear reason. (Descartes, *Regulae ad directionem ingenii*, AT X, 405–406)

c. We shall treat next that part of logic which contains the rules of reasoning, the part deemed most important and almost the only one which is usually treated with any

care. But there is reason to doubt whether it is indeed as useful as is generally believed. Men are more likely to err by drawing inferences from false premises than by inferring incorrectly from their premises, as we have already said; rarely are we led astray by inferences which are false only because the conclusion is incorrectly drawn, and those who are not able to recognize the falsity with the sheer light of reason can usually not understand the rules for that, and still less apply them. (Arnauld and Nicole, *La logique ou l'art de penser* III, introduction)

d. The power of reasoning – that is, of drawing a conclusion from a chain of premises – may with some propriety be called an art ... It resembles the power of walking, which is acquired by use and exercise. Nature prompts to it, and has given the power of acquiring it; but must be aided by frequent exercise before we are able to walk. (Reid, *Essays on the Intellectual Powers of Man* VI.4 (556))

e. The thought in mind which corresponds to a direct syllogism is like this: first, a phantasm of the named thing is conceived with that accident or affect because of which it is called with the name which is the *subject* in the minor proposition; then, there occurs in the mind a phantasm of the same thing with the accident or affect because of which it is called with the name which is the *predicate* in the same proposition. Third, thought returns to the named thing with the affect because of which it is called with the name which is in the predicate of the major proposition. After that, remembering that all those affects are of one and the same thing, it concludes that these three names are names of some one thing; this is the truth of the conclusion ... It is obvious that no conception or thought which corresponds in the soul to a syllogism from universal propositions can be in animals without the use of names ... (Hobbes, *De corpore* I.4.8)

f. What room then is there for the Exercise of any other Faculty, but outward Sense and inward Perception? What need is there of Reason? Very much; both for the enlargement of our Knowledge, and regulating our Assent: For it hath to do, both in Knowledge and Opinion, and is necessary, and assisting to all our other intellectual Faculties, and indeed contains two of them, *viz.* *Sagacity* and *Illation*. By the one, it finds out, and by the other, it so orders the intermediate *Ideas*, as to discover what connexion there is in each link of the Chain, whereby the Extremes are held together; and thereby, as it were, to draw into view the Truth sought for, which is that we call *Illation* or *Inference*, and consists in nothing but the Perception of the connexion there is between the *Ideas*, in each step of the deduction, whereby the Mind comes to see, either the certain Agreement or Disagreement of any two *Ideas*, as in Demonstration, in which it arrives at Knowledge; or their probable connexion, on which it gives or with-holds its Assent, as in Opinion. Sense and Intuition reach but a very little way. The greatest part of our Knowledge depends upon Deductions and intermediate *Ideas*. (Locke, *An Essay concerning Human Understanding* IV.17.2)

g. Suppose further, that [a person] has acquired more experience, and has lived so long in the world as to have observed similar objects or events to be constantly conjoined together; what is the consequence of this experience? He immediately infers the existence of one object from the appearance of the other. Yet he has

not, by all his experience, acquired any idea or knowledge of the secret power, by which the one object produces the other; nor is it, by any process of reasoning, he is engaged to draw this inference. But still he finds himself determined to draw it: And though he should be convinced, that his understanding has no part in the operation, he would nevertheless continue in the same course of thinking. There is some other principle, which determines him to form such a conclusion. This principle is CUSTOM or HABIT. (Hume, *An Enquiry concerning Human Understanding* 5.1)

h. What reasoning is, can be understood only by a man who has reasoned, and who is capable of reflecting upon this operation of his own mind. We can define it only by synonymous words or phrases, such as inferring, drawing a conclusion, and the like ... Although the capacity be purely the gift of Nature, and probably given in very different degrees to different persons; yet the power of reasoning seems to be got by habit. (Reid, *Essays on the Intellectual Powers of Man* VII.1 (673))

i. But the highest talent in reasoning is the invention of proofs; by which, truths remote from the premises are brought to light ... In all invention there must be some end in view: and sagacity in finding out the road that leads to this end, is, I think, what we call invention. In this chiefly, as I apprehend, and in clear and distinct conceptions, consists that superiority of understanding which we call *genius*. (Reid, *Essays on the Intellectual Powers of Man* VII.1 (674))

One central issue was about reasoning as a natural faculty and its relation to the logical theory of inference. It was admitted that people have a power to make conclusions from information without knowing anything about logical theory; Zabarella called this ‘a natural instinct’. However, he claimed that even natural inferences happen in accordance with logical rules. There is no opposition between the ordinary way of thinking and formal logic, since formal logic is really the best developed and organized form of human reasoning. Therefore it can actually be useful in particular problems (**a**). Numerous later philosophers were not equally convinced of the value of logical theory. Thus Descartes believed that reason is a natural faculty which can operate well on its own and that external dialectical rules cannot capture its optimal course (**b**). See also *Discours de la methode*, AT VI, 17, *La recherche de la vérité par la lumière naturelle*, AT X, 516, Letter to Clerselier, summer 1646, AT IV, 444. This does not mean that Descartes would not have had a positive attitude to strict logical argumentation; see *Meditationes*, AT VII, 522, 544. In his mathematical works he also emphasised the disciplined method of progress. The Port-Royal logicians were willing to discuss and accept rules of inference, but they noted that they are not very important: according to them, errors in formal inference

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are unusual in ordinary thought (c). (See also *La logique* III.1.) On seventeenth-century arguments in favour of logic, see Nuchelmans 1998.

To Locke, it seemed that formal logic was without any contact to real thought: 'The Understanding is not taught to reason by these Rules [of syllogising]; it has a native Faculty to perceive the Coherence, or Incoherence of its *Ideas*, and can range them right, without any such perplexing Repetitions. ... They are not the only, nor the best way of reasoning, for the leading of those into Truth who are willing to find it' (*An Essay concerning Human Understanding* IV.17.4). See Buickerood 1985. Condillac later expressed the same attitude in a more extreme way: 'The operation of judging gives birth to that of reasoning. Reasoning is nothing but a linking together of judgements which are interdependent. There is little need to dwell on these operations. What the logicians have said in many volumes appears to me to be entirely superfluous and of no use' (*Essai sur l'origine des connaissances humaines* I.2.70). Reid was more tolerant of logic, since he pointed out that the natural faculty of reasoning needs training and exercise (d). One expression of the widespread tendency to see inference and logic as a rather trivial affair was the wish to reduce all valid reasoning to a few 'laws of thought'. 'We have said that the art of reasoning consists of comparing two ideas by means of a third one. For judging if the idea A contains or excludes the idea B, we take a third idea C and compare each of them to it in succession. If the idea A is contained in the idea C and the idea C in the idea B, we conclude that the idea A is contained in the idea B. If the idea A is contained in the idea C and the idea C excludes the idea B, we conclude that the idea A excludes the idea B. All exact syllogisms must reduce to these two cases' (d'Alembert, *Éclaircissemens sur les Éléments de Philosophie*, V). See also, for example, Kant, *Die falsche Spitzfindigkeit der vier syllogistischen Figuren*, 2 (Akademie-Ausgabe II, 49).

The other main theme was reasoning as a mental act, that is, the psychological explanation of how reasoning takes place. The empiricist philosophers showed some interest in this. Hobbes construed a strictly nominalist model where it is assumed that reasoning is based on finding that several descriptions are applicable to a single phantasm (e). Later, Locke calls attention to the importance of inferences in widening the scope of 'knowledge and opinion'. According to him, an inference works by ordering ideas in a suitable chain where their successive connections become evident. Obviously this model would work only in some simple inferences (f). Hume presents the most radical form of the empiricist theories. He divides inferences in two: 'All reasonings may be divided in two kinds, namely, demonstrative reasoning, or that concerning relations of ideas, and moral reasoning, or that concerning matter of fact and existence' (*An Enquiry concerning Human Understanding*

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4.2 (30)). He then concentrates only on non-demonstrative reasoning, but does not further describe what the psychological inference act is like. His examples are mostly from habitual association between two things (**g**). There is even one remark that ‘what we may in general affirm concerning these three acts of the understanding [that is, conception, judgement and reasoning] is, that taking them in a proper light, they all resolve themselves into the first, and are nothing but particular ways of conceiving our objects’. (*A Treatise of Human Nature* I, III.7 (97n); see also *Treatise* 112, 153.) Reid criticizes the extreme standpoints. He argues that reasoning is a special capacity that differs from all others, belongs to every human being, and is so fundamental that it cannot be defined. Its applications have degrees, ranging from simple conclusions to profound proofs (**h**, **i**).

6 Reasoning as Computation

a. Just as propositions are formed from simple notions, so the syllogism, which is often called the highest kind of thought, consists of propositions. For when the mind sees that certain two notions agree with a third – which involves a double proposition – it immediately collects them together and pronounces that they agree with one another; or if it sees that one agrees and the other does not agree, which again involves a double proposition, it immediately pronounces that they do not agree with one another. Accordingly, a syllogism is nothing other than thinking or internal discourse, whereby from two given propositions a third is necessarily assembled. (Gassendi, *Institutio logica*, 38)

b. When a man *Reasoneth*, hee does nothing else but conceive a summe totall, from *Addition* of parcels; or conceive a Remainder, from *Substraction* of one summe from another: which (if it be done by Words,) is conceiving of the consequence of the names of all the parts, to the name of the whole; or from the names of the whole and one part, to the name of the other part ... REASON, in this sense, is nothing but *Reckoning* (that is, Adding and Substracting) of the Consequences of generall names agreed upon, for the *marking* and *signifying* of our thoughts; I say *marking* them, when we reckon by our selves; and *signifying*, when we demonstrate, or approve our reckonings to other men. (Hobbes, *Leviathan* I.5 (18))

c. We must accomplish a state where every paralogism is nothing but an *error in calculus* and where a *sophism*, when expressed in this new kind of scripture, is really nothing but a *solecism* or *barbarism*, which the very laws of this philosophical grammar can easily adjust.

After that, when controversies arise, there needs to be no more dispute between two philosophers than between two arithmeticians. It will be enough that they take

a pen in hand and sit down at their tables, perhaps asking a friend to them, and say to each other: *let us calculate*.

To make sure that no one thinks me to boast or to hope for the impossible, it must be known that with this art we can (after appropriate study) obtain only *what could whenever be ingeniously derived from what is given*, or what is determined by what is given, just as in geometrical problems. (Leibniz, untitled, ed. Gerhardt. vol. VII, 200–201)

d. All human reasoning is performed by means of some signs or characters. Indeed, the mind neither can nor need always distinctly observe the things themselves or even the ideas of them, and thus, for reasons of economy, signs are applied for them. For if a geometrician, every time when he mentions a hyperbola, a spiral or a quadratrix in a demonstration, would always be compelled to call up for him their exact definitions or constructions, and furthermore the definitions of the terms which are included in these definitions, it would take very long for him to reach anything new ... Signs are the more useful the more they express the concept of the thing they denote, so that they may be of service not only for representation but also for reasoning. (Leibniz, untitled, ed. Gerhardt, vol. VII, 204)

Many authors assumed that the conclusion is accomplished immediately, without any special activity. Thus Gassendi thought that it arises as a necessary result from the joint conscious presence of the premises in the mind **(a)**. '*Dianoëa* is the mind's third operation, which is constituted of propositions in the way that something true is drawn from something true ... The third operation is often called *argument*. It is noteworthy that a concept and its formation, a proposition and its production, an argument and its construction are the same. They are *immanent* actions with no other results' (Jungius, *Logica Hamburgensis*, Prolegomena).

A subtler opinion was to claim that the inference happens by means of a course of steps which follow each other in a definite order. A forerunner of this attitude may be the Ramist way of seeing logic as a set of universally applicable techniques for conducting discourse in due course. Later, Hobbes developed the notion of inference as computation, following the example of mathematics **(b)**. 'By reasoning I mean computation. Computation is *collecting the sum of a number of things together, or finding the remainder of taking one from another*. Thus, reasoning is the same as *adding and subtracting* ...' (*De corpore* I.2). Seeing a man first vaguely, then clearly, somebody gains an idea 'that is compounded from the preceding ideas, and the mind compounds them in the same order as in speech the names *body, living, rational* are compounded in one name *corpus animatum rationale*, or *man*. Likewise from the concepts *quadrilateral, equilateral, rectangular* we compound the concept of a square' (I.3 (4)).

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Hobbes's theory fascinated young Leibniz: 'Thomas Hobbes, everywhere a profound examiner of principles, rightly states that everything done by our mind is a *computation*' (*De arte combinatoria*, ed. Gerhardt, vol. IV, 64). Leibniz was interested in the computational model, since it would well suit his *in esse* analysis of concepts. In this way, inferences could be seen as operations that compare the contents of ideas: if the definitions are everywhere spelled out, inferring becomes simple calculation (c). See, for example, *Specimen calculi universalis*, ed. Gerhardt, vol. VII, and Schepers 2008. A comparable attempt of computation with ideas was Jakob Bernoulli's *Parallelismus ratiocinii logici et algebraici* (Boswell 1990). On proposals for calculi of reasoning, see Capozzi and Roncaglia 2009. Leibniz also emphasized that symbols and abbreviating terms are, in practice, irreplaceable for successful reasoning (d). The signs that express the concepts best are those of the universal *ars characteristica*, or universal calculus. In these issues he shared the goals of the various seventeenth-century projects of creating an ideal universal language. See Maat 2004, ch. 5.

Part VIII
Psychology of Language

Chapter 23

Ancient and Early Medieval Theories

Mika Perälä

There were two ancient traditions on signs and language which played a significant role in medieval discussions: the Aristotelian tradition deriving from Boethius's second commentary on the *De interpretatione*, and the Augustinian tradition (with some Stoic influences), which was important to early medieval theorists such as Anselm of Canterbury and Peter Abelard. These two traditions remained separate in many contexts, but there were also authors who drew from both sources, raised further questions, and opened up perspectives in entirely new directions.

An influential intuition common to both traditions was that a sign is to be understood in triadic terms: a sign is something that is related both to a thing and to the mind. There were different ways in which this idea of a semantic triangle was worked out in more precise terms. Aristotle's formulation was that utterances are signs of the affections of the soul, and that the affections of the soul are likenesses of the things, whereas Augustine defined sign as something that shows itself to the sense, and shows something else to the mind. By contrast, the Stoics conceived of the triangle in somewhat different terms: in addition to the thing and the sign, they referred to the third term as the 'sayable' (*lekton*), which is that which can be said of a thing, and which is that which is signified by a sign. These formulations were discussed and elaborated in various ways by subsequent philosophers. While Aristotle and Augustine assumed that signs signify our thoughts, and the Stoics that they signify the sayables, some medieval philosophers, such as Roger Bacon, Duns Scotus, and William of Ockham, maintained that signs directly signify objects, and this appears to have been the view of Epicurus. There were also other later developments, such as the idea of Peter of Ailly and others, that mental acts themselves be seen as signs. (1)

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It was common to distinguish between two different kinds of signs or meaningful voices: those which signify by nature, and those which do so by convention or imposition. However, there were different views about which signs belong to which kind. Most authors, including Aristotle and Augustine, took it for granted that names are imposed on things conventionally. However, there were speculations raised in Plato's *Charmides*, by Epicurus, and by the Stoic Chrysippus about whether names could arise naturally. A conception common to all classical authors was that the concepts, or inner words, which are signified by linguistic terms do not belong to any spoken language such as Greek or Latin. This also became a standard view in medieval times. The nature of sounds voiced by irrational animals was a matter of controversy. The prevailing view was that, for example, the barking of a dog signifies by nature, but there were thinkers such as Augustine who counted it as a 'given sign' which a living being gives in order to show its affections, sensations or thoughts to others. Late ancient and medieval philosophers raised further questions regarding the imposition of names, for example: when the objects referred to cease to exist, do the names lose their capacity for signifying those objects? There were arguments for and against this position. For example, Boethius of Dacia argued against it on the grounds that the object's existence and the term's significance are two different ways of being, and thus independent of one another; Roger Bacon, conversely, admitted the loss of capacity, and suggested that we re-impose a term every time we apply it to a given object (2).

It was always acknowledged that the signs by which an animal conveys its affections to others are species-sensitive. Aristotle argued that human beings are unique among animals in that they signify by speech what is good and bad, and just and unjust, and this makes human beings the kind of social animals they are. It was also acknowledged that different signs were related to different affections. All authors seem to have taken for granted that human beings are the only ones that may use a sign in many senses. Augustine was exceptionally cautious in pondering how animal communication differs from human communication. He left unresolved whether animal signs are comparable to the sighs and shouts of those who are in pain, or to something given in an attempt to signify something to someone. Many later authors, including Albert the Great, were prone to follow the first way: the behaviour of irrational animals is subject to nature, and therefore also the sounds they express are determined by nature (3).

There is little evidence to tell us about ancient and medieval views on how people learn a language in practice. Augustine's work is an exception. Although his *Confessions* was certainly not a study of human development in general, Augustine seems to rely on the idea that a child learns a language by imitating the way in which competent speakers use the language: in the very beginning, the child learns the meanings of words through ostension and other bodily movements, for example facial expression, which are performed in pursuance of the spoken words by competent speakers. Augustine shrewdly observed that this method is not sufficient for fixing the intended meaning exactly (4).

Language formed the basis of classical and medieval education. The three subjects of the 'trivium' (grammar, rhetoric and dialectic) were all concerned

with language. Higher education started with logic, in accordance with all major schools of philosophy: the Peripatetic, Stoic, and the Platonist. A common conception was that although grammar was a product of human art, the basic partitions into the parts of speech were constrained by nature, and thus grammar, as an art, imitated nature. Some new ideas were put forward in the late thirteenth century by the ‘modists’ who argued that grammar should be regarded as a science rather than an art. On their view, all spoken languages are based on a universal grammar. What was characteristic of their view was the assumption that there is a structural analogy between the ‘modes of being’, the ‘modes of understanding’, and the ‘modes of signifying’ which are common to all languages. The critics of the modists, of whom the most distinguished were mental language theorists such as William of Ockham, did not oppose the assumption of a universal grammar as such, but the assumption concerning the structural analogy between speech, understanding, and reality, and the assumption that in each linguistic expression, there inheres a mode of signifying (5).

When grammarians discussed questions pertaining to congruence, they made interesting observations about the relationships between language and understanding. They correctly pointed out that certain congruence mistakes are based on the failure of the form and the sense to match up correctly. These authors also pointed out that certain expressions are formally congruent, but do not make sense, for example, ‘Socrates has hypothetical shoes with categorical shoe-laces’ (6).

The use of metaphor was regarded as an important way of extending language because it made it possible to speak of an object that lacked a name, or to argue from analogy. Metaphor was not to be used arbitrarily. Like Aristotle, many theorists held that a metaphor should somehow correspond to its referent: some sort of similarity should be perceived in otherwise dissimilar things. Metaphors played a significant role in many genres of writing, and a metaphor could be used for various purposes. For example, Aristotle’s metaphor of punishment as a medical treatment was used in political contexts by many later authors. Metaphors also played a special role in spiritual language. Thomas Aquinas gave several reasons why the Bible should use figurative rather than scientific or philosophical language (7).

All ancient and medieval authors agreed that the ambiguities inherent in language are a major source of incorrect reasoning. Aristotle was the first to give an extensive account of the different types of fallacy, and his distinctions provided a starting point for many later textbooks on this topic (8).

1 The Semantic Triangle: Words, Thoughts and Objects

a. But surely it would be perfectly right, as I was just saying, to truly call this a falsehood, namely ignorance in the soul of the one who is deceived. For the falsehood in words is a copy of the affection in the soul, an image arising afterward, and not an altogether unmixed falsehood. (Plato, *Republic* II, 382b–c)

b. Utterances are symbols of affections in the soul, and writings are symbols of utterances. And just as letters are not the same for all men, neither are sounds. But what these are signs of in the first place, the affections of the soul, are the same for all; and what these affections are likenesses of are also the same. (Aristotle, *De interpretatione* 1, 16a3–8)

c. First, then, Herodotus, we must grasp the things which underlie words, so that we may have objects of belief, inquiry and puzzlement to which we refer when we make judgements, and not have everything undetermined for ourselves when we give arguments *ad infinitum*, or have words which are meaningless. For it is necessary that the primary concept pertaining to each word is apparent and requires no further proof if we are going to have an object of inquiry, puzzlement and belief as a reference point. (Epicurus, *Letter to Herodotus* 37)

d. The Stoics said that three things are linked together: that which is signified, that which signifies, and that which obtains. That which signifies is an utterance, for example ‘Dion’; that which is signified is the thing shown by an utterance, and which we apprehend as it subsists in accordance with our thought, whereas it is not understood by non-Greek speakers although they hear the utterance; that which obtains is the external object, for instance, Dion himself. Of these, two are bodies, namely the utterance and that which obtains, but one is incorporeal – the thing signified, i.e. that which is sayable, which is true or false. (Sextus Empiricus, *Adversus mathematicos* VIII.11–12)

e. Aristotle teaches us what it is that is primarily and immediately signified: his answer is ‘thoughts’, but through these, as intermediates, are ‘things’. And it is not necessary to conceive of anything else additional to them, intermediate between the thought and the thing, which the Stoics posited and decided to call a ‘sayable’. (Ammonius, *In De interpretatione* (17.24–28))

f. On the basis of all the aforementioned the only thing that ought to be understood is this: that which is given in writing signifies a locution which consists of voice, and that which is a vocal locution designates a locution by the soul and the intellect that is performed through tacit cogitation. And this intellectual locution grasps and designates the things which are primarily presented to it. Of these four, Aristotle claims two to occur naturally, the things and the conceptions of the soul (i.e., the locution which takes place in intellectual acts), because they are the same and invariable among all people, whereas the other two do not occur naturally, but are constituted by imposition. They are verbs, nouns and letters, and therefore he does not claim that they are naturally fixed, because not everyone, as is demonstrated above, uses the same voice and the same elements. (Boethius, *In Peri hermeneias I* (24–25))

g. A sign is a thing which makes something else, beyond the species which it presents to the senses, come to be thought from it. (Augustine, *De doctrina christiana* II.1.1–2)

h. A sign has a twofold comparison: both to that which it signifies, and to that to which it signifies. The first is essential, and the sign always has it in act, whereas the second it has in habit. And it is called a sign on the basis of the first, not the second. Therefore a circle above a tavern is always a sign, even if no one looks at it. (Bonaventure, *Commentaria in quatuor libros Sententiarum* IV.1.1.2, ad 3)

i. Sign belongs to the category of relation, and is essentially said in relation to that which it signifies, because the thing signified is actual when that sign is actual, and the thing is potential when the sign is potential. Furthermore, unless someone understands something through the sign, it is empty and idle. Indeed, it would not be a sign, but would remain a sign only in terms of the matter of sign, and not in terms of the account of sign, just as the matter of ‘father’ remains, but not the relation of paternity, when the son is dead ... Sign is that which, when given to the sense or intellect, designates something to the intellect itself. (Roger Bacon, *De signis* I.1–2)

Plato discussed questions pertaining to language in many dialogues, most notably in the *Cratylus* and *Sophist*. One of his assumptions was that spoken language is an image of the affections of the soul (**a**). He did not turn this idea into a general semantic theory, but Aristotle worked out the details in the *De interpretatione*. He argued that utterances are symbols of affections in the soul, and affections in the soul are likenesses of the things. This theory gave an explanation of why utterances (and written words) have the semantic contents they have. Aristotle also argued that, although letters and sounds are clearly not the same for all people, affections of the soul are the same, and so are the things that they are likenesses of. Aristotle thus held that, for example, the statements ‘It rains’ and ‘*Il pluit*’ have exactly the same type of semantic content (**b**).

Epicurus prefaced his account of physics with some epistemic remarks (**c**). He reminded his reader that beliefs should be properly grounded. Since there is not much further evidence for Epicurus’ views on language, interpreters have attempted to identify a semantic theory underlying these remarks. The crucial questions are what *ennoemata* are (translated as ‘primary concepts’ here, following Long and Sedley 1987), how they stand in relation to utterances, and what, if anything, this explains about signification (see Everson 1994a, 79). These questions would require a detailed study, but given the epistemic context, it is reasonable to assume that Epicurus’ point is this: first, whenever we wish to investigate and talk about anything, we need to have a concept of the object under study; and second, if we attempt to demonstrate something on the basis of this concept, the concept itself may not be in need of proof (see Barnes and Schenkeveld 1999, 196).

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According to Sextus, the Stoics distinguished between three things: that which signifies, that which is signified, and that which obtains (**d**). They referred to that which is signified as a sayable (*lekton*). It is worth noting that they did not take sayables to be necessarily signified (and thus mind-dependent) entities. When arguing that sayables *subsist* in accordance with our thoughts, the Stoics meant, presumably, that sayables serve as the contents of our thoughts and the meanings of expressions; see Frede 1994. The context for this discussion was the question of what the bearers of truth are. Sextus reported that the Stoics attributed truth to that which is signified. Not all sayables can be true or false (e.g. what is signified by ‘Dion’; see Long and Sedley 1987, II, 197 n. 6), but only those which constitute a complete state of affairs (*pragma autoteles*; e.g. ‘Dion talks’): they were referred to as assertibles, or propositions (*aksiōmata*); see Diogenes Laertius VII.65, Sextus Empiricus, *Adversus mathematicos* VIII.74. The Stoics thus disagreed with Aristotle, who held that what is signified are the affections in the soul. As Sextus reports, the Stoics also disagreed with Epicurus (and the Peripatetic Strato) who ascribed truth to the utterances and did not postulate a separate category of sayables in addition to the things signified; for Epicurus’ view, see also Plutarch, *Adversus Colotem* 1110C–D; 1117F–1118B.

Ammonius further elaborates on the difference between Aristotle and the Stoics. He explains that, on Aristotle’s view, expressions primarily signify thoughts (not affections in the soul in general), and secondarily things (**e**). Boethius gives the same interpretation, though in different terms (**f**). This was also the standard interpretation of Aristotle among medieval commentators. Augustine did not directly draw from either the Aristotelian or Stoic sources, but he also offered a three-tiered account of signification (**g**). Medieval authors modified these models. For example, Bonaventure held that a sign does not necessarily stand in relation to the person to whom it signifies: for instance, the sign of a tavern is a sign even when no one pays attention to it, i.e., no one takes it to be a sign (**h**). Roger Bacon denied this position: a sign is only a potential sign when it is not interpreted (**i**). Mental language theorists argued that mental states themselves are signs; see, e.g., Peter of Ailly, *Concepts and Insolubiles*, 16–17.

2 Signification by Convention and by Nature

a. Socrates: But if the primary names are to be means of presenting anything, do you have any better way of making them presentations than by making them as much as possible like the things which they are to present? Or do you prefer the

way suggested by Hermogenes and many others, who claim that names are conventional items and present things to those who constructed these items and knew the things beforehand, and that convention determines the correctness of a name, and it makes no difference whether one agrees to the convention as it is, or adopts an opposite one according to which small would be called great and great small? Which of these two ways do you prefer?

Cratylus: Presenting by likeness whatever one wishes to present is by all means better than presenting by chance signs. (Plato, *Cratylus* 433d–434a)

b. A *name* is a sound that is significant by convention without time, and none of its parts is significant in separation ... I say by ‘convention’ because no name is a name by nature, but only when it has become a symbol. Even inarticulate noises, such as those made by beasts, do indeed reveal something, yet none of them is a name. (Aristotle, *De interpretatione* 2, 16a19–21, 24–29)

c. We also say ‘*egō*’ in this way, pointing to ourselves in the place where the mind appears to be [i.e., the chest], the demonstration being carried there naturally and appropriately; and apart from such a demonstration of the hand, we nod towards ourselves as we say ‘*egō*’ – indeed the very sound ‘*egō*’ is of such a kind, and is followed by the demonstration described. (Galen, *On the Doctrines of Hippocrates and Plato* II.2.10.1–8)

d. We must assume that even nature was educated and compelled in many different ways by things, and that reasoning later made its commands more accurate, and added new discoveries ... Thus, we must also assume that names did not originate by imposition, but men’s own natures underwent affections which were specific to each tribe respectively and received impressions peculiar to each, and each of the affections and impressions made them to exhale breath peculiarly according to the racial differences from place to place. (Epicurus, *Letter to Herodotus* 75)

e. Since reason is two-fold, one constituting utterance, the other the disposition of the soul, we shall first begin from that which is related to utterance, and which is arranged according to the voice. But if the reason related to utterance is voice, which through the tongue is significant of the internal affections of the soul (for this is the most common definition of it, and is not adopted by one sect only, but alone concerns the conception of reason), what pertaining to this is missing from the animals which make sounds? Why does not an animal perceive also that which it somehow undergoes before expressing what is intended? (I mean by ‘perception’ that which is voiced silently in the soul.) Hence, if that which is expressed by the tongue is reason, in whatever manner it may be expressed, whether in a barbarous or a Greek way, or a canine or a bovine way, the animals which express it participate in it: men speaking according to human conventions, and other animals according to the conventions which they, respectively, received from the gods and nature. (Porphyry, *De abstinentia* III.3.1–17)

f. Among signs, some are natural, others given. The natural ones are those which, without a will or any other desire to signify, make something else beyond themselves to be recognised from themselves. An example is smoke which signifies fire ...

Given signs are those which living beings give to one another for demonstrating, as much as they can, the motions of their mind, or whatever they have sensed or thought. (Augustine, *De doctrina christiana* 2.1.12–14; 2.1–2)

g. Whoever, then, can understand the word, not only before it sounds, but even before the images of its sound are contemplated in thought – this something that belongs to no language, that is, to none of those languages which are called national, and of which ours is Latin ... For when we speak the truth, that is, speak of what we know, then the word which is born from the knowledge itself which we retain in the memory must be altogether of the same kind as that knowledge from which it is born. For the thought formed from that thing which we know is the word which we speak in our heart, and it is neither Greek, nor Latin, nor any other language, but when we have to bring it to the knowledge of those to whom we are speaking, then some sign is assumed by which it may be made known. (Augustine, *De trinitate* XV.10 [19])

h. Each of these three kinds of speaking has its own kind of words. Yet, the words of the kind of speaking which I mentioned third and last, since they concern things which are not unknown, are natural and are the same for all nations. It is because these words exist that all the other words have been invented. Hence, when such a word exists, no other word is needed for knowing a thing, and when such a word is not possible, no other word is useful for singling out a thing. Without absurdity, natural words can also be said to be truer, insofar as they resemble the things that they are words of, and designate them more manifestly. Apart from those things which we use as their own names to signify themselves, such as the vowel ‘a’, no other word appears so similar to and is so expressive of its object, as this likeness by means of which the thing itself is expressed to the thinking mind’s eye. This is therefore correctly said to be the most proper and principal word for its object. (Anselm of Canterbury, *Monologion* 10.25)

i. ... after Socrates’s destruction, ‘Socrates’ signifies such a being as Socrates was once, although such a being is not Socrates in reality. Similarly, what is possible for the intellect in thinking is possible for utterances in signifying, since that which can be thought can be what is signified by utterances, and in that way. But when the thing has passed away, it is possible for the intellect to conceive of it as it was earlier; for it is possible to think the thing after its destruction. Therefore, it is also possible to signify the thing by means of an utterance as it was earlier. (Boethius of Dacia, *Omnis homo de necessitate est animal*, q. 3)

j. One mode of imposing [a name on something] is a formal imposition which is vocally expressed and assigned to a thing: in such a way, names are imposed on infants and other things. Another mode of imposing is the one that happens when the intellect by itself considers an entity or a non-entity of which it wishes to enunciate something, or considers what it wishes to enunciate about another thing [of the same kind], and thus it imposes a name ... When a man for the first time

sees an image depicting a man, he never states by way of vocal imposition, ‘Let the image be called “man”’, as names are imposed on infants, but rather, he applies the name ‘man’ to the picture and uses that name in signifying the picture through it, and in enunciating about the image through that name. Similarly the one who first sees a white seal does not say at first that such a seal is called ‘white seal’ in terms of vocally expressed formal imposition, but rather, he applies the term ... And thus, all day long, we produce and discover the significates of expressions with no reference to the formal imposition that is vocally expressed in the way that names are given to infants. (Roger Bacon, *De signis* IV.3, 154–155)

In the *Cratylus*, Plato examined the question of whether things have ‘correct names’. Cratylus was the spokesman for an affirmative answer, suggesting that the criterion of correctness is likeness between the name and the thing, whereas Hermogenes denied this view and held that all names are conventional (**a**); for discussion, see Barney 2001; Sedley 2003; Ademollo 2011. Hermogenes’ conventionalism (*Cratylus* 384c10–e2) was followed by Aristotle (**b**) and most subsequent authors, but there is evidence that Epicurus and the Stoic Chrysippus took some interest in Cratylus’ naturalistic position, or some qualified version of it (**c**, **d**). On Stoic naturalism, see also Origen, *Contra Celsum* I.24=SVF 2.146; cf. Diogenes Laertius VII.83. Text (**c**) is part of Chrysippus’ argument that the rational soul is located in the heart: the jaw’s pointing towards the chest and the heart within should be evidence for this claim. Also some Neoplatonists such as Proclus (see e.g. *In Cratylum* 17, 7.18–8.14; 51, 19.30–20.18) favoured naturalism, while others, including Porphyry (see Iamblichus, *De mysteriis* 7.5, 257.1–8 Des Places) and Ammonius (*In Aristotelis De Interpretatione* 34.17–37.18), declined this view; for discussion, see Sheppard 1987; van den Berg 2004.

Unlike Aristotle and the Stoics, late ancient philosophers discussed meaningful sounds other than human speech. Porphyry observed that irrational animals express their affections according to certain conventions (*nomoi*) which are given by gods or nature (**e**). Augustine made a very influential distinction between natural and given signs, but unlike most of his successors, he placed the sounds enunciated by irrational animals to be the given ones (**f**). On animal language, see Eco et al. 1989.

Porphyry, Augustine (**g**) and many others (see e.g. Anselm of Canterbury, **h**) agreed with Aristotle (**1b**) that, although languages and dialects vary among different peoples, and from one population to another, the affections of the soul are common to all. For Anselm, see also pp. 268–269 above. Medieval philosophers made a number of modifications to the received views. For example, a standard position regarding proper names was that, when a name was imposed on a certain thing, it preserved its meaning even when the thing

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disappeared, because we could still think of the object (i). An alternative view was suggested by Roger Bacon, who held that names were re-imposed every time they were applied (j). Another extensively discussed question was whether naming requires knowledge of the nature of the thing referred to. Some authors such as Thomas Aquinas (e.g. *Summa theologiae* I.13, prologue; I.13.8, ad 2) and Henry of Ghent (*Summa quaestionum ordinariarum* 73, 215–216, ed. in Rosier-Catach)) argued that since a name signifies the nature of its referent through our understanding, we can name an entity only as we know it. Duns Scotus attacked this position in several writings (see e.g. *Lectura* 1.22 (ed. Vat. 17, 301)), arguing that we can name a thing properly and distinctly even when we lack proper and distinct understanding of the nature of the thing. What matters is the intention to signify: for example, one may know a stone only as something that hurts the foot, but impose a name to signify the stone under its proper account. Rejecting the theory of analogical signification, Scotus claimed that the same applies to naming God. For discussion and further references, see Ashworth 2012, 265–272.

3 Speech and Communication as the Basis of Community

a. It is evident that a human being is more of a political animal than bees or any other gregarious animals, for nature, as we say, makes nothing in vain, and the human is the only animal who is capable of speech. And while voice is a sign of pleasure or pain, and thus occurs in other animals (for their nature attains to the perception of pleasure and pain and to expressing them to one another), speech is meant to express the useful and the harmful, and likewise the just and the unjust. And it is a characteristic of humans that they alone have a sense of good and evil, of just and unjust, and the like, and the community of those who have this sense makes a household and a city. (Aristotle, *Politics* I.2, 1253a7–18)

b. Human speech signifies what is useful and what is harmful. It follows from this that it signifies the just and the unjust. For justice and injustice consist in the fact that some people are treated equally or unequally with respect to useful and harmful things. Thus speech is proper to humans, because it is proper to them in comparison with the other animals, to have a knowledge of the good and the bad, the just and the unjust, and other such things which can be signified by speech. Since, therefore, language is given to man by nature, and since language is meant for men to communicate with each other about the useful and the harmful, the just and the unjust, and other such things, it follows, from the fact that nature does nothing in vain, that humans naturally communicate with one another about these things.

But communication regarding these things is what makes a household and a city. Therefore, the human is naturally a domestic and political animal. (Thomas Aquinas, *Commentary on Aristotle's Politics* I.1, 37)

c. An animal's utterance is air which has been struck by an impulse, whereas that of a human is articulated and expressive of a thought, as Diogenes [of Babylon] says, and is perfected at the age of fourteen. (Diogenes Laertius, *Lives of Philosophers* VII.55)

d. Indeed, the variety and difference in the vocal sounds of animals indicate that they are significant. Hence, we hear one sound when they are terrified, but another, of a different kind, when they call their associates, another when they summon their young to food, another when they lovingly embrace each other, and another when they incite to battle. And so great is the difference in their vocal sounds, that, even by those who have spent their whole life in the observation of them, it is found to be extremely difficult to ascertain their meaning, on account of their multitude. (Porphyry, *De abstinentia* III.4)

e. We have no other reason for signifying, i.e. giving a sign, but bringing forward and transmitting to another soul that which the one who gives a sign bears in the soul. [...] Irrational animals also have among themselves certain signs by which they express the desire of their soul. For when a cock hits upon food, it gives a vocal sign to its hen to come along, and a cock pigeon calls the she pigeon by a coo, or the other way round, and many similar things tend to attract our attention. Whether these signs attend the affection of the soul as the look and shout of the one who is in pain, or are really given in order to signify something, is another question and does not pertain to what is discussed here. (Augustine, *De doctrina christiana* 2.3)

f. A significative voice is that through which an animal conveys something to all or some members of its species; each animal can do that because nature has given it an idle voice. And we can see this clearly because a hen clucks to her pullets in one way when she summons them to meal, and in another way when she teaches them to watch out for a kite. Irrational animals communicate to all individuals of their species, for example an ass to all asses and a lion to all lions, but a human does not communicate to all, but some humans, because a Gallic-speaker communicates to a Gallic-speaker, a Greek to a Greek, and a Latin to a Latin, and to them exclusively. Furthermore, no animal communicates to an individual of another species except in a qualified sense, because it only communicates through its own voice to those who belong to its own species, even though some animals, with effort and habituation, can use the voice of another animal, as a magpie uses the voice of a human, and signify something in some qualified sense, and non-naturally, to those other than members of its own species, such as a human. And although, perhaps, a human could understand something through the voice of magpie, this voice is not significative in the proper sense, because it does not arise out of an intention to signify, and although a human could apprehend something through such a voice, the magpie does not at any rate signify anything to a magpie through it. (Roger Bacon, *Summulae dialectices* II.21–23)

g. Although there are two things in the soul, namely affection concerning pain and pleasure, and the conception of the heart concerning things, voice does not signify affection, but rather conception, for voice is a sound which is interpretative of the conception of the heart, and thus voice belongs to nothing other than the one who has an intellect which grasps the intentions of things, and thus produces voices in order to express conception ... Even if irrational animals have the capacity for appearance, as we have shown above [129.66–130.2], they do not move on account of the appearances themselves, in accordance with reason regarding them, but on account of nature, and thus all animals act in the same way. For one swallow builds a nest just as another does, and this imitation is based on nature rather than skill. Therefore the imaginative soul in them does not control their nature, nor does it drive that into action in accordance with the various appearances, as in the case of humans, but rather is controlled by nature and is driven into action by that. And this happens because, although those animals by themselves entertain appearances, they do not produce voices in order to express them. The affections related to pleasures and pains are grounded in nature rather than the soul, and therefore the animals express these affections by sounds and chirping. (Albert the Great, *De anima* II.3.22 (131.18–25, 33–46))

According to Aristotle, humans differ from the other animals in that their language expresses not only pleasure and pain, but also things which are beneficial and just. This enables them to establish a household and a city (a); see also *Nicomachean Ethics* IX.9, 1170b10–14. Thomas Aquinas expounded the difference between human speech and animal voice in terms of understanding and habit: human beings understand what they express, whereas animals enunciate their feelings out of habit (*Commentary on Politics* I.1, 28). He also explained why speech is vital in the emergence of a community: by using language, people communicate with each other, and this constitutes the community (b).

The Stoic distinction between animal utterance and articulate speech implied that the voices produced by non-rational animals, such as the barking of a dog or the crowing of a cock, were not regarded as significant in the technical sense of the word, since they were not expressive of a thought (c). This view was common in the ancient grammatical tradition, based, to a great extent, on Stoic logic. For example, the grammarian Priscian defined articulated sound as that which is ‘conjoined with a sense of the mind of the one who speaks’ (*Institutiones grammaticae* 1.5.6). In this line of thought, thinkers confronted this question: in which sense can animal utterances be said to be significant at all?

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Some late ancient authors, such as Porphyry and Augustine, took interest in the communication of non-rational animals. In connection with his arguments for vegetarianism, Porphyry made observations on the variety of meaningful sounds which irrational animals produce (**d**); for discussion, see Sorabji 1993. Augustine admitted that certain animal species use signs, by which they express their appetite: for example, a cock gives a vocal sound to a hen when it has found some food. However, he left it open whether the sound issues from a motion of the mind ‘without a will’, or is truly given for the sake of signifying (**e**); see also *De doctrina christiana* 2.2.9–16. For Augustine’s distinction between natural and given signs, see **2f**.

Roger Bacon also admitted that irrational animals enunciate significant voices. However, he denied that these voices are significant in the proper sense, because this would require that the animal had an intention to signify (**f**). Commenting on Aristotle’s *De Anima* 420b5–421a7, Albert the Great gave a similar argument: when an irrational animal expresses an appearance or an affection that it undergoes, it does not act in an attempt to signify something, but is rather controlled by nature (**g**).

4 Learning the Meaning of Words

a. I remember this, and later I turned my attention to the way in which I had learned to speak. It was not the case that older people taught me by offering me words according to a certain doctrinal order, as was the case soon afterward with reading. Rather, I taught myself, using the mind you gave me, my God, because I wanted to express the sensations of my heart by cries and various sounds and gestures of the parts of body so as to get my own way, and not to imply that anything goes. So I used my memory, when people called an object by some name, and when they moved towards something according to the voice, and I watched and remembered that they used that sound when they wanted to indicate that thing. What they meant was clear from their bodily gestures, those natural words which are common to all races, such as facial expressions or glances of the eyes or movements of other parts of the body, or a tone of voice that indicated an affection of the mind when people sought, held on to, rejected or shunned things. In this way I gradually gathered words which were used in their proper places in different sentences. And hearing them frequently, I came to understand which things they were signs of. And after having exercised my own mouth to utter them, I enunciated my wishes by using the same signs. Thus I conveyed the signs which expressed my will to those among whom I lived, and I took steps deeper into the stormy world of human life, although

I was still subject to the authority of my parents and the guidance of my elders. (Augustine, *Confessiones* I.8 [13])

b. If someone ... were to ask me what walking is, and I attempted to teach him what he asked without a sign, by promptly walking, how am I to guard against his thinking that walking is the amount of walking that I did? If he thinks that, he will be mistaken, for he will judge that anyone who walks more or less than I have has not walked. And what I have said about this one word can be applied to every word which I had agreed could be shown without a sign, apart from the two we have accepted. (Augustine, *De magistro* 10)

Acquisition of language, as opposed to the acquisition of general concepts, was a topic that was rarely discussed by ancient authors; for some suggestions regarding Aristotle, see Charles 2000, chapter 6; Modrak 2001, 21–22. Augustine was more specific on this topic. In the *Confessions*, he gave a somewhat fictitious account of his early years, including the learning of his mother tongue. He points out that ostension, bodily gestures, facial expressions, and the tone of voice played an important role in gathering the intention of the speaker (**a**). On Wittgenstein on this text, see Kirwan 1994. Augustine did not assume that ostension and the other gestures by the speaker could fix the meaning of his words unambiguously. The risk of misunderstanding lurks in even the simplest ostension, as the example of walking shows: for one might conclude on the basis of demonstration that the length of walk made a difference (**b**); see also Burnyeat 1999.

5 Grammar

a. Even if grammar is not natural, it imitates nature. And since grammar is conventional, it is not seen to arise from nature: for natural things are the same for all people, while grammar is not the same for all. However, we have already seen that nature is the mother of arts. While grammar has developed to some extent, or rather for the most part, on account of the invention of man, it nevertheless imitates nature, and in part, it originates from nature, and intends, as far as possible, to conform to nature in every respect. Therefore, as regards the study of elements, it has, with approval of nature, limited the number of vowels to five among all peoples, and yet with many peoples the number of letters is greater. (John of Salisbury, *Metalogicon* I.14)

b. ... all languages are grammatically identical. The reason for this is that the whole grammar is derived from the things – for it cannot be a figment of the

intellect, the figment of the intellect being that to which nothing corresponds in a thing external to the soul – and that the natures of things are similar for all people, and likewise the modes of being and the modes of understanding are similar for all those among whom the languages are different, and consequently the modes of signifying are similar, and therefore so are the modes of construction or speech. And thus the whole grammar which inheres in one language is similar to the one which inheres in another language. (Boethius of Dacia, *Modi significandi*, q. 2)

Ancient and medieval thinkers expressed various views on the nature and status of grammar as an art and branch of knowledge; see e.g. Schmidhauser 2010; Luhtala 2005; Copeland and Sluiter 2009. In general, grammar was taken to concern the elements of speech and the principles by which these elements are combined. There was a universal consensus that languages vary in terms of grammar, or what was commonly referred to as grammar. However, it was also pointed out that, although grammar is not a work of nature, there are many grammatical features which appeared to be universal. For example, John of Salisbury claimed that the number of vowel sounds is five among all peoples (**a**). This was an ancient belief that is attestable, for example, in the Stoics; see Diogenes Laertius VII.57.

In the late thirteenth and early fourteenth century, the so-called speculative grammarians, or ‘modists’, such as Boethius of Dacia and Thomas of Erfurt, went much further in their attempt to reconsider the received understanding of grammar. They were dissatisfied with the fact that grammarians had thus far restricted themselves to merely giving descriptions of grammar with reference to the ancient grammarians (see Boethius of Dacia, *Modi Significandi*, q. 9). Their suggestion was that grammar should be understood as a demonstrative science in the Aristotelian sense of the word. The idea was that grammar should explain what causes the different parts of speech; on the assumption that linguistic expressions have different modes of signifying (*modi significandi*), the question to be answered was what these modes are grounded in. The modists argued, with reference to Aristotle (**1b**), that the modes of signifying were based on the modes of understanding (*modi intelligendi*), and the modes of understanding on the modes of being (*modi essendi*). This meant that all languages, at a general level, are grammatically identical (**b**). Regarding the power of this theory, the explanations of single terms such as ‘goddess’ (the Latin *dea*, which is a feminine noun, and connotes passivity in contrast to what was generally conceived of the being of goddess) became extremely complex and difficult to understand, and more comprehensive approaches superseded this theory. For a survey on this topic, see Rosier-Catach 2009.

6 Congruence

a. Regarding errors, barbarism is an expression that is contrary to the usage of authoritative Greek speakers, while solecism is a statement that is put together incongruently. (Diogenes Laertius, *Lives of Philosophers* VII.59)

b. I have not forgotten that some people have upset the common opinion that barbarism is an error involving a single word, whereas solecism a composition of incongruous words. They assert that solecism occurs in a single word if someone utters ‘*hoûtos*’ in reference to a woman or to more than one person. (Apollonius Dyscolus, *Grammatici Graeci* II.2 (273))

c. [...] regarding the unity of substance [i.e. *Elohim*, ‘God’, which in Hebrew is singular or plural] to be shown, it is carefully taken into account, when it is said, ‘has created’, and not ‘have created’, thus preserving the numerical singularity of the verb in accordance with the unity of substance which is understood through the subject noun, although that noun is plural in number with respect to the form of voice and the inflectional ending, just as when it is said, vice versa, ‘The crowd rush’, a plural verb is applied to a numerically singular noun when one understands the plurality of things through the subject noun. (Peter Abelard, *Theologia ‘Scholarium’* (recensiones breviores) 77.930–936)

d. The ordering is sometimes congruent in form, but not in sense, because the words are congruently combined with each other according to their accidents, but do not signify an understanding, as when an adjective of secondary imposition is combined with a substantive of primary imposition. When I say, for example, ‘Socrates has hypothetical shoes with categorical shoe-laces’, the words are congruently combined as regards form, but the listener will not reasonably understand anything from them. I will show this by way of simile. Speech is like painting, for just as a painting represents and depicts a thing, so also speech depicts an understanding. For speech does not arise for any other purpose but representing an understanding. (Petrus Helias, *Summa super Priscianum*, Liber Constructionum, P135ra26–rb35 (II, 833))

Ancient grammarians distinguished between two types of error: barbarism and solecism. According to one definition, barbarism was a mispronunciation of some ‘standard’ Greek, while solecism was a congruence mistake (**a**). Another definition was that barbarism is a misuse of one word, whereas solecism concerns the combination of words (**b**). Incongruence gave rise to interesting remarks on the collision between form and sense. Peter Abelard expounds here on a passage from Genesis: even though the Hebrew ‘*Elohim*’

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is plural in form, the unity of God is emphasised by pairing it with a singular verb (c). The example ‘The crowd rush’ (*turba ruunt*), illustrating the converse (a singular noun paired with a plural verb), originates from Ovid, *Heroides* 1.85 and 12.143. The grammarian Petrus Helias discussed a different case: ‘Socrates has hypothetical shoes with categorical shoe-laces’ (d). According to him, this statement is incongruent in sense, even though it is congruent in form, and is thus not a construction at all because the listener cannot understand it. In support, he refers to Priscian according to whom construction involves understanding; see Priscian, *Institutiones grammaticae* XVII.108; Aristotle, *De Interpretatione* 3, 16b20. For discussion, see Ebbesen 1981b, 93.

7 Metaphor

a. It is a great thing to make a proper use of aforementioned poetical forms and of compounds and strange words. However, it is greater to be able to use a metaphor. It is the one thing which cannot be learnt from others; and it is also a sign of genius, for applying a good metaphor requires a perception of similarity. (Aristotle, *Poetics* 22, 1459a4–8)

b. Both metaphors and epithets must be fitting to mean anything, and this happens when they are based on analogy ... if one wishes to praise, one must take the metaphor from something better in the same genus; if to blame, from something worse. I mean this: since opposites belong to the same genus, one does what is suggested if one says that a man who begs prays, and a man who prays begs; for both are forms of asking. (Aristotle, *Rhetoric* III.2, 1405a10–11, 14–19)

c. Metaphor occurs when a word applying to one thing is transferred to another because the similarity is seen to make possible this transference. Metaphor is used for the sake of placing something before the eyes, as follows: ‘This riot awoke Italy with sudden terror.’ (Anonymous, *Rhetorica ad Herennium* IV.34.45)

d. ‘Awoke’, that is, aroused those who were at rest. Note that the similarity here is based on the following: just as sleepers are aroused from their rest by a sudden noise, so the assault of Hannibal awoke the Romans who, living in peace, were at rest. (Thierry of Chartres, *Commentary on the Rhetorica ad Herennium* IV.34.45)

e. Virtues are concerned with actions and feelings; but every feeling and every action implies pleasure or pain. Hence, for this reason too, virtue is about pleasures and pains. Corrective treatments also indicate this, since they use pleasures and pains; for correction is a form of medical treatment, and medical treatment naturally operates through contraries. (Aristotle, *Nicomachean Ethics* II.3, 1104b14–18)

f. And when the situation is heated up, it is a great man's duty to punish the guilty, to spare the majority, and in every turn of fortune to hold to what is right and honourable ... Therefore, in encountering danger we should follow the practice of physicians who give mild treatment to those suffering from a minor disease, but are compelled to apply risky and uncertain remedies to more serious illnesses. (Cicero, *De officiis* 1.82–83)

g. And thus, the Prince loves his brothers so that he corrects their errors in medical fashion; he acknowledges their flesh and blood so as to subject them to the Word of the Spirit. It is especially the practice of physicians that when they are unable to cure a disease with poultice and palliatives, they apply stronger means such as fire and iron. They would never use the stronger ones except when there is no hope of achieving health by means of the milder ones. And thus, when it is not sufficient to cure the vices of inferiors with a gentle touch, the Power correctly induces pain and pours intense punishments on the wounds, and with pious cruelty, it rages against the evil, while the integrity of the good is secured. (John of Salisbury, *Policraticus* IV.8.6–15)

h. As Dionysius teaches in *Celestial Hierarchies* II, it is more convenient that divine truths be expounded with figures of base rather than noble bodies, and this is for three reasons. First, because in this way the human mind is better preserved from error, for then it appears to be clear that divine truths are not accounted for in their proper terms, which might have been open to doubt had they been described with figures of nobler bodies, especially for those who could think of nothing nobler than bodies. Second, because this is more fitting to the knowledge of God that we have in this life. For what He is not is clearer to us than what He is, and thus similitudes of things farthest away from God make us judge more truly that God is above what we say or think of Him. Third, because divine truths are thus better hidden from the unworthy. (Thomas Aquinas, *Summa theologiae* I.1.9, ad 3)

Aristotle defined metaphor as a 'name that belongs to something else' (*Poetics* 21, 1457b7). The transference should not be arbitrary, but 'either from genus to species, or from species to genus, or from species to species, or on account of analogy' (1457b7–9). This implies that there is some kind of likeness between the various referents of the name used as a metaphor, and a good metaphor should invoke a perception of this connection (**a**, **b**). Aristotle understood metaphors as equivocal expressions; for example, 'sharp' as equivocal when used of a vocal sound, an angle, and a knife (see *De anima* II.8, 420a29 and *Topics* II.15, 107a14–18). Here Aristotle praises the one who skilfully uses a metaphor (**a**), but warns against giving a definition in terms of metaphor (*Posterior Analytics* II.13, 97b29–39, *Topics* VI.2, 139b33–140a2).

In addition to Aristotle, other important classical sources on metaphor were Quintilian's *Institutio oratoria* (VIII.6.4–18) and the anonymous *Rhetorica ad Herennium* (**c**), which is commented on here by Thierry of Chartres (**d**).

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These sources also acknowledge likeness as a requirement of metaphor. A useful medieval source on metaphor is Giles of Rome's extensive and very influential commentary on Aristotle's *Rhetoric*, f. 103rb–105va. For a survey on metaphor in logicians, see Ashworth (2007).

Arguments from analogy are based on metaphors. Aristotle's metaphor of punishment as a medical treatment (e) was used in various ways by later authors, including Cicero (f) and John of Salisbury (g). John of Salisbury's *Policraticus* (published around 1159) was the first extensive medieval treatise on political power, and it remained an influential source of political philosophy for centuries. The author conceived of the state in metaphoric terms as an organic body. The offices of the state corresponded to parts of the body, and its functions were accounted for by way of analogy. It was the task of the Prince, the Head of State, to cure the illnesses of the state body like a physician heals the illnesses of the human body.

Aquinas discussed the question of why the Holy Scripture should use metaphors instead of scientific and philosophical jargon. A puzzle was that, if people are like God in being intelligent, why is it not the case that God would reveal himself to them in a non-figurative language? Aquinas's answer was that figurative language better fits our limited capacities in this life (h).

8 Fallacies

a. Regarding arguments which involve equivocation and account, the error arises because one is unable to distinguish that which is said in many ways, for it is not easy to distinguish certain things such as one, being, and sameness. However, regarding those which involve composition and division, it is because one assumes that it makes no difference whether the statement is combined or divided, as is indeed the case with most statements... this kind of fallacy [i.e. that of form] also belongs to those which are based on language because ... the error arises when we are studying together with other people rather than when we do so by ourselves, for the inquiry with another person is conducted by means of arguments, whereas the inquiry by oneself is conducted as much by means of the object itself. (Aristotle, *Sophistical Refutations* 7, 169a22–27, 36–40)

b. The refutation which is based on the consequent arises from the assumption that consequence is convertible: whenever the consequent, provided that it is the case, is necessarily the case, it is assumed that the antecedent, if it is the case, is also necessarily the case. This is also why failures arise concerning the beliefs based on perceptions. For people often take bile to be honey because honey is attended by a yellow colour. And again, since the ground happens to be wet after rain, we assume

that, if the ground is wet, it has been raining. However, this does not necessarily follow. (Aristotle, *Sophistical Refutations* 5, 167b1–8)

c. Chrysippus said that every word is ambiguous by nature, since two or more meanings can be understood from it. But Diodorus Cronus stated: ‘No word is ambiguous. No one says or thinks anything ambiguous, and nothing should be taken to be said beyond what the speaker thinks he is saying. When you have understood something other than what I had in mind, I should be taken to have spoken obscurely, rather than ambiguously. For the mark of an ambiguous word would have had to be that whoever said it was saying two or more things. But no one is saying two or more things if he thinks he is saying one.’ (Aulus Gellius, *Noctes atticae* XI.12.1–3)

d. Fallacies of diction are said to be ones in which arguments would not have a defect if there were no conventionally established signs. This happens through the way in which the one who generates precise arguments in the mind, without recourse to any idioms and voluntarily established signs, will not be deceived by those fallacies... However, other fallacies are called to be independent of diction. They can be found in arguments which are composed of propositions which only exist in the mind, even if no sign would be voluntarily established, and any spoken or written arguments may have similar defects. (William of Ockham, *Summa Logicae* III–4.1 (Oph 1, 750))

Aristotle identified in the *Sophistical Refutations* thirteen types of fallacy. According to him, fallacies can be divided into those which are based on language and to those which are not (*Sophistical Refutations* 4, 165b23–24). The fallacies of ambiguity, composition and division, and form are linguistic (a), whereas the fallacy of the consequent is not (b). The idea that enquiry by oneself is conducted by means of the objects themselves suggests that Aristotle considered the fallacies in this enquiry to be based on ignorance or misunderstanding of the objects under study (a). Unlike Ockham, he did not assume that enquiry by oneself was conducted by means of mental language, and that the fallacies in question were logical mistakes in mental language. For a medieval commentary on these texts, see e.g. Peter of Spain, *Tractatus* VII, 57–76, 150–163; translated in Kretzmann and Stump 1988, 257–261. There was an established commentary tradition on the *Sophistical Refutations*; see Ebbesen 1981a. As far as the evidence suggests, the Stoics only discussed fallacies which are based on linguistic ambiguities (c); for references, see p. 318 above. In line with Aristotle’s *Sophistical Refutations*, Ockham distinguishes the fallacies which are based on linguistic ambiguities from those which are not. However, his novel point is to refer the latter fallacies to logical failures in mental language (d). On this discussion, see Knuuttila 2009 and the chapter on ‘Medieval Theories of Mental Language’.

Chapter 24

Mental Words and Mental Language in the Later Middle Ages

Russell L. Friedman and Jenny Pelletier

It is now a well known and increasingly well studied episode in medieval philosophy of mind that William of Ockham in the first quarter of the fourteenth century developed a genuine theory of mental language, in which the mind builds up mental propositions out of component concepts. Although one can find hints of the idea of mental speech, as distinct from spoken or written speech, already in Plato, Aristotle, and the Stoics, nevertheless for the later scholastic discussion, it was Augustine's treatment of the *verbum cordis* in especially book fifteen of his *De trinitate* that set the agenda.

Augustine saw his task as clarifying the relationship between the Father and the Son in the Trinity, and he took his point of departure in passages from John's Gospel (esp. John 1,1–3 and 14) in which the Son is identified with a *logos*, translated into Latin as *verbum* and into English as 'word'. Thus, Augustine sets out to show how the way in which the mind forms its 'word' can teach us something about the way in which the Father generates his Son, and Augustine did this by expounding on the relationship between, on the one hand, an item of knowledge available to us in our intellectual memory, and, on the other, the same item of knowledge as consciously thought. The item of knowledge as consciously thought is, for Augustine, the *verbum cordis*, i.e. (in later terminology) the mental word or concept. Thus, according to Augustine, just as the mental word is in all ways like the memory knowledge from which it is begotten, differing only insofar as it has been begotten, so the Father and the Son are identical essentially, differing only on account of the Son's generation, his receiving the divine essence from the Father. Precisely because the word must be absolutely like the knowledge from which it is begotten, except that it is begotten, it must be prelinguistic, just like the knowledge in the memory before being thought

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is prelinguistic (1). The important and interesting point here is that for Augustine, thought, and more specifically the basic components of thought, these *verba*, are anterior to any language, and yet by the very name he uses for them, ‘words’, Augustine appears to open up for a linguistic aspect or dimension to thought. This opening will be capitalised on by later thinkers.

Although there were some developments in the period between Augustine and the thirteenth century – one can point to Boethius, Anselm, and Abelard as having made significant contributions, some of which were noted by later thinkers –, nevertheless it was only in the thirteenth century when the psychological works of Aristotle, especially the *De anima*, and those of Aristotle’s Muslim commentators became widely studied at the newly founded universities did a true, self-sustaining discussion of concepts and attendant mental phenomena like the mental proposition develop. A convenient starting point to pick up this discussion is with Thomas Aquinas, who created a theory of human scientific knowledge which melded the Aristotelian and the Augustinian legacies available to him. In Aquinas’s new synthesis, the Augustinian *verbum* had become an element added onto the whole Aristotelian process of ‘abstraction’ as it was understood in Aquinas’s day (see pp. 274–275 above). Whereas the Aristotelian process had ended with the agent intellect impressing an intelligible species upon the possible intellect, Aquinas added a step: an act of the possible intellect itself which was productive of a term, this term being the subsistent endpoint of the act. Aquinas calls the term the *conceptio* or word, ‘because it is what is signified by the exterior’, i.e. linguistic, ‘word’, and only through the concept does the spoken word signify the thing (1). Aquinas appears, then, to posit what we could call an ‘act-object’ theory of concepts, i.e. a theory on which the act of the intellect issues in a term, an intentional object, that is in some sense distinct from the act itself.

This act-object theory was popular among the earliest supporters of Aquinas, especially, although not exclusively, among his fellow Dominicans. One can take as an example of this Hervaeus Natalis who distinguished the mental word from the intellect’s act of saying (*dicere*) through which the word is formed, just as Aquinas did, and denied that the mental word is identical to any of the several acts which the intellect has (2). There was a critical reaction to the ‘act-object’ theory from primarily Franciscan authors. Peter John Olivi was an early and very vocal proponent of the rival ‘act’ theory of the word (3). According to this theory, the concept is simply the intellect’s act itself. On Olivi’s terms, ‘our mental word is our actual thought’, which in turn means that intellectual cognition involves ‘nothing serving as an object ... that differs from the act.’ Whereas the act-object theory postulates a product of a first mental act – a product which serves as the act’s object, thereby making something manifest to someone – the act theory holds that the mental act alone can take care of all the representational functions necessary to satisfactorily explain intellectual cognition. Views like Olivi’s are related to our contemporary ‘adverbial’ theories of cognition.

These two theories – ‘act-object’ and ‘act’ – dominate the later-medieval theories of intellectual cognition. While many Dominicans like Thomas Aquinas and Hervaeus defended an act-object theory, many Franciscans joined Olivi in holding an act theory of the word. Among these Franciscans were John Duns Scotus

and William of Ockham. Within this general picture, however, is hidden a wide variety of interesting and innovative views. The Franciscan theologian, Peter Auriol (4), holding a type of act-object theory, insisted that concepts *are* (according to strict numerical identity) extramental particulars, but having a different type of existence, a different *modus essendi*, than the real existence they have extramentally. Auriol called this special type of existence ‘intentional’ or ‘objective’ existence. A second out-of-the-mainstream position is that of the Dominican thinker, Durand of St. Pourçain (5), who defended an act theory of the concept. Durand claimed that the concept is merely the intellectual act itself, and further that the intellectual act has no existence of its own, since it is just a way that the intellect itself exists, i.e., as standing in a relationship with an object of cognition.

A related debate, and one which played a large role in the transition from mental words to mental language, is that over the possibility of the intellect having more than one act (and hence more than one thought) at a time. Thus, according to Durand of St. Pourçain (5), the intellect can have just one act at a time. He defended this view at length in a treatise from around 1311 or 1312 which was directed against the English theologian, Thomas Wylton. Wylton (6), perhaps for the first time in the scholastic university debate, held that the human intellect not only can but does in fact entertain more than one thought at a time. Wylton starts from the reasoning intellect and works backwards; that is to say, Wylton argues that we can only explain the fact that the intellect works in the way it actually does if we grant that it can have many acts at once. We can call Wylton’s view a ‘compositional’ theory of the mental proposition: a mental proposition requires at least three acts in the intellect simultaneously, two of those acts corresponding to the terms of the proposition, and a third act functioning as the mental copula. Against this view, Durand holds what we can call a ‘unity’ theory of the mental proposition, according to which a mental proposition is ontologically simple, being produced all at once as a whole, while nevertheless being semantically complex.

In the fourteenth century Ockham develops a highly complex and sophisticated notion of a mental language which is, in principle, the universal language of thought for all human beings (7). Ockham famously changed his mind on the ontological status of concepts. Initially advocating an act-object theory, superficially similar to Peter Auriol’s, Ockham ultimately endorsed an act theory on which the concept is simply the intellectual act itself. These mental concepts, conceived of as natural signs of things, are the elemental semantic units of mental language. They are combinable into syntactically structured and semantically rich mental propositions in which they figure as subject and predicate terms, supplemented by logical particles known as ‘syncategoremata’. A mental proposition, according to the mature Ockham, is an organised composite of many, discrete intellectual acts; for this reason, Ockham appears to hold a version of Wylton’s ‘compositional’ theory of the mental proposition. Both the terms and propositions of mental language are prior to and underlie all spoken and written languages. Following in Ockham’s footsteps, John Buridan (7) continues to develop an elaborate understanding of mental language, with some salient differences

concerning the function and reference of concepts. Further, Buridan agrees with Wylton and Ockham that the mental proposition is composed of many acts. In contrast, Gregory of Rimini supported Durand's unity theory of the mental proposition where the mental proposition is produced all at once in a single act (7). The debate on the ontological structure of the mental proposition would remain prominent into the early modern period (on the early modern debate, see Ashworth 1981, 1982; Meier-Oeser 1997, 2004).

1 From Augustine to Aquinas

a. The human mind, therefore, knows all these things it has obtained through itself, through the senses of its body, and through the testimonies of others, and holds them in the storehouse of its memory. And from these things a true word is begotten when we say what we know, but the word is prior to every sound and prior to every thought of sound. And this is because the word is then most like the thing which is known, from which its image is also begotten, since the sight of thought arises from the sight of knowledge. This is the word belonging to no language, the true word about a true thing, having nothing from itself, but everything from the knowledge from which it is born. (Augustine, *De trinitate* XV.12.22 (493–494, lines 87–96))

b. If memory is taken to be exclusively a power able to conserve species, then it is required to say that there is memory in the intellective part [of the soul] ... sometimes intelligible species are in the intellect only potentially, and then the intellect is said to be in potentiality; sometimes they are in the intellect insofar as the intellect's act has been brought wholly to completion, and then the intellect is actually understanding; but sometimes they are there in a way falling between potentiality and act, and then the intellect is said to be disposed. And in this last way, the intellect conserves a species even when it is not actually understanding. (Thomas Aquinas, *Summa theologiae* I.79.6c, ad 3)

c. Someone understanding, insofar as they are understanding, can have an order to four things, namely: to the thing understood; to the intelligible species by which the intellect is brought to act; to the very [act of] understanding; and to the intellect's conception. And the conception in fact differs from the other three. It differs from the thing understood, since the thing understood is sometimes outside the intellect, while the intellect's conception is only in the intellect; and further the intellect's conception is ordered to the thing understood as to an end, for the reason that the intellect forms inside itself a conception of the thing understood is to cognise that thing. The conception differs from the intelligible species, since the intelligible species, by which the intellect is brought to act, is considered to be the source of the intellect's action, since every agent acts insofar as it is in act, but it is brought to act through some form, and that form is the source of action. The conception differs from the intellect's action, because the aforementioned conception is considered to be the term of the action, and something that is, as it were, constituted through it; for

by its action the intellect forms the definition of the thing, as well as affirmative or negative propositions ... But this conception of the intellect in us is properly called the word, because it is what is signified by the exterior word. For the exterior spoken sound (*vox*) signifies neither the intellect itself nor the intelligible species nor the act of the intellect, but it signifies the conception of the intellect, and through the mediation of the conception the sound refers to the thing. (Thomas Aquinas, *De potentia* 8.1)

For Augustine (**a**), all the knowledge in our possession rests in the intellectual memory, ready to be consciously thought about. We form a word upon thinking any particular item of knowledge stored in the memory; thus, the knowledge in the memory is ‘formable’, i.e., ready to be formed, while the word is that same knowledge actually formed. This word is an exact likeness of the prior knowledge, it has ‘nothing from itself, but everything from that knowledge from which it is born’, and the word differs from the knowledge from which it is born exclusively in virtue of the fact that it is born or formed. Thus, in Augustine’s famous dictum, the word is *scientia de scientia, visio de visione* (Augustine, *De trinitate* XV.15. 24): the word and the knowledge from which it comes differ only insofar as the word is born from the prior knowledge; in all other respects they are identical. Following from this, Augustine claims that there are two tiers of thought process behind any physical action or physical speech. Closest to our material or physical expressions is what he calls the ‘sight of thought’ (*visio cogitationis*): this is speaking linguistic words in our mind, thinking silently to ourselves in language. But there is a deeper level of thought: concepts must exist which are unhampered by the constraints of language, which are prior to all tongues and hence at least potentially common to all speakers, indeed ‘prior to every sound and prior to every thought of sound’. Thus, Augustine says that prior to the ‘sight of thought’ there is a ‘sight of knowledge’ (*visio scientiae*). This is the inner word, the word of the heart (*verbum cordis*): our knowledge, as it is stored in the memory, brought forth as the object of our understanding. It should be noted that Augustine’s terminology makes perfect sense: the word of the heart is formed by the mind’s eye focusing on – seeing or thinking – the *knowledge* stored in the memory, and hence is sight of knowledge, whereas the more material, linguistic level is seeing the knowledge that we have *thought* in the word. Thus: sight of knowledge versus sight of thought. In this way Augustine associates concepts more with sight and images than with language, which stands in contrast to his calling concepts ‘words’ (of course he is constrained to do that by the roots of the discussion in John’s Gospel.) (On Augustine’s theory of the mental word, see, e.g. Sarridge 1999).

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The challenge for Thomas Aquinas when discussing mental words was to reconcile the Aristotelian and Augustinian traditions available to him. Augustine's theory of the mental word explains how we bring to conscious thought *dispositional* knowledge, i.e. knowledge which we already have stored in our memory and ready to use. Aristotle's theory of intellectual cognition explains how we come to have *original* intellectual knowledge, i.e. knowledge acquired upon direct sensory acquaintance with extramental reality. To bridge the gap between the two theories, Aquinas claims that, upon the completion of the process of Aristotelian abstraction as it was understood in his day, the active intellect impresses an intelligible species upon the possible intellect, and the possible intellect informed by the intelligible species (but not actively thinking its content) just is Augustine's intellectual memory (**b**). Moreover, according to Aquinas the possible intellect informed by the intelligible species is able to have an act of its own, and the product of this act is what Augustine called the word. In this way Aquinas melded together the Aristotelian and Augustinian legacies available to him. Thus, with respect to the ontology of the mental word or 'conception', Aquinas is clear (**c**): it cannot be reduced to the intelligible species abstracted from the phantasm by the agent intellect, because the intelligible species is the source of the possible intellect's further act, since the intelligible species is the form on account of which the intellect is brought from potentiality to act. Moreover, the word is not identical to the act of the possible intellect, through which the definition of the thing or its word is formed, because the word is the term, i.e. product, of the act. The word or conception is thus in some way or another ontologically diverse from the intellectual act through which it is produced. This can be called an 'act-object' theory of the mental word. Finally, Aquinas claims that the mental word takes its name from the crucial role it plays as semantic mediator between spoken words and the things they refer to. (Pasnau 1997, 254–271; Brower and Brower-Toland 2008; Kawazoe 2009; Cross 2009.)

2 Hervaeus Natalis

a. However, with respect to the third issue, namely in what way a mental word relates to an act of understanding, it seems to me at least at present that a mental word is not identical to an act of understanding. And it seems that this can be persuasively argued as follows: the intellect produces a mental word in order to make something manifest to itself [i.e., to the intellect]; but that which is produced in order to make something manifest does not itself appear to be a manifestation or an apprehension (these are the same thing) just as that which is subject to local motion

is not itself a local motion. Therefore, a word is not itself the manifestation or apprehension of the thing about which the word is formed. (Hervaeus Natalis, *De intellectu et specie*, 146)

b. Moreover, cognitive acts that are proper to complex concepts, which are signified by declarative sentences just as ‘the stars are equal’ is a declarative sentence, are acts of assenting or dissenting or opining or knowing. But it can happen that the intellect sometimes assents, sometimes dissents, sometimes opines, sometimes knows, and sometimes even doubts, while the form of the proposition and of the concept (which a proposition is a sign of) remain the same. Therefore, a complex concept, which a declarative sentence signifies, is not the assenting or dissenting or opining or knowing or some other cognitive act by which the complex is to be cognised. And consequently, it seems that no concept or word is a cognitive act. (Hervaeus Natalis, *De intellectu et specie*, 146)

c. Therefore, it seems probable to me that a mental word is really diverse from an act of understanding. And similarly, saying, i.e. forming a word, is different, it seems to me, from an act of understanding, although it cannot exist without an act of understanding. This is because saying is nothing other than forming the kind of concept that is necessary for moving the intellect towards an expressed cognition of that about which it is formed. (Hervaeus Natalis, *De intellectu et specie*, 147)

Hervaeus Natalis denies that the mental word is identical to any act of understanding (**c**). He also distinguishes the word from the act through which the word itself is consciously understood. In this respect, Hervaeus argues through analogy (**a**): just as something subject to local motion is distinct from the local motion itself, so the word, whose purpose is to make something manifest or apparent to someone, is distinct from the actual manifestation or appearance, i.e. the act of understanding itself. This distinction between word and intellectual act applies, according to Hervaeus, also for higher level words, i.e. propositions (**b**): I can clearly have different propositional attitudes towards the same propositional content. Hervaeus concludes that a ‘complex concept’, i.e., the higher order mental word which is the mental equivalent of a declarative sentence, is distinct from the acts of understanding through which I have different propositional attitudes towards the complex concept. In fact, Hervaeus goes so far as to claim that it seems probable that the mental word is really diverse from the act of understanding, using the term ‘really’ (*realiter*) in the technical sense of their having each their own different real being (**c**). Indeed, on Hervaeus’s theory, the mental word is sandwiched between two intellectual acts: an act of saying through which the word is formed, and an act of understanding through which the word is actually understood. The word itself is distinct from both of these acts, serving, in different ways, as the object (or term) of these acts. (On Hervaeus’s cognitive theory, see Trottmann 1997.)

3 Peter John Olivi

a. Our word is our actual thought, and vice versa ... There is no necessity or usefulness in positing a word [which is distinct from the actual thought]. This is because the intellect understands things and their real relationships, and these are present to the intellect in themselves or in memory species. Thus, whether the things and their relationships are present to the intellect in themselves or the things themselves are absent but nevertheless presented to the intellect through memory species, there is no necessity for another mirror serving as object in which the things would be presented to the intellect. That would rather be an impediment ... Whatever we conceive first and per se through our intellect's actual consideration, we conceive in the very act of considering. Indeed, in its internal conception and formation not only is the act itself conceived but also its object is conceived insofar as it exists intentionally and representationally in the act. And this is the concept which we first experience within us. But because, when such an act has passed there remains with us a memory of the act and its object, thus we experience secondarily that something remains in us through which we can remember the act which has passed and its object. Augustine calls these memory species, and to the extent that they have been formed or caused by the force of the act which has passed and have been received and retained in the matrix of our memory, they can indeed be said to be conceived and formed in us. But not on this account do they properly deserve to be called a 'word' ... (Peter John Olivi, *Tractatus de Verbo* 6.2.1, 6.2.3 (138.137; 144–145.319–326, 339–352))

b. ... the first abstraction of universal concepts comes about solely through the act of abstractive consideration attending and considering the real features of the common or specific nature without the features of its individuation. Through this [act of abstractive consideration], however, nothing serving as an object is really abstracted or formed which differs from the mentioned act of consideration, although a kind of species within the memory is caused through that act, and this remains in us later, when the act has passed; later we return to this species, when we want to remember in their absence the things we had earlier considered intellectually and as present. (Peter John Olivi, *Tractatus de Verbo* 6.2.3 (145.365–371))

Olivi holds an 'act' theory of the concept, on which the intellectual act itself is the concept, not a product of the intellectual act. Two main types of arguments for his position are as follows. First, positing an object distinct from the intellectual act would compromise the immediacy of intellectual cognition, since it would act as 'an impediment' to our grasping reality – here Olivi insists (in typically Franciscan fashion) on cutting down the mediators between extramental reality and our grasping of it. Second, according to Olivi, there is no explanatory justification for positing the product, since the act itself

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covers all the intentional and representational functionality which act-object theorists say is necessary **(a)**. On Olivi's view, the act theory explains everything that needs to be explained about intellectual cognition and it does so more simply and more satisfactorily than the act-object theory does. For Olivi, the only objects produced by mental acts are 'memory species' **(b)**.

Given the simplicity benefits which appear to accrue from discarding the object from the act-object theory of the concept, it might be asked why Aquinas and many others would have ever supported it. Robert Pasnau (1997, 265–276) has suggested one plausible reason: we normally think that we need to have an object of our thought in all instances in which thinking takes place; in cases where there is an extramental correlate for a particular concept, a case can be made for the object of thought simply being that extramental object. But what about cases in which there is no (attractive) extramental correlate, like universals, propositions, or imaginary creatures? What is the object of thought in those cases? Here an act-object theorist like Aquinas would seem to have an advantage: the object is the word formed by the mind, a mental correlate. There is at least one other advantage that act-object theorists seem to have over act theorists: with their theory they can more straightforwardly explain intellectual memory. That human beings have an intellectual memory – a memory serving exclusively to recall to mind intellectual knowledge that I have had in the past – was accepted by basically all medieval philosophers, in part because this type of recall seems to be a part of ordinary human experience, in part because the intellectual memory is an integral element in Augustine's theory of the mental word. But, it seems hard to account for intellectual memory using an act theory of concepts, since, once the act is over, what is left in the intellect to carry the memory trace which can be recalled at a later point? The act-object theory has an immediate answer to this question: the object of the mental act itself is the memory trace. We can see the problem clearly in Olivi's theory: he actually posits 'memory species' to be the only products of the intellectual act, thereby implicitly admitting that, on this score, the act-object theory has an advantage, since some type of product is necessary in order to account for intellectual memory. Olivi attempts to turn this to his own advantage **(a)**, by drawing a distinction between occurrent intellectual cognition and the basis for memory; moreover, he points out that for Augustine the word was not the basis for the memory, but rather the other way around: the memory was the basis for the word. But neither of these moves appear to deal in a fully satisfactory manner with the philosophical issues involved in intellectual memory. One elegant way of getting around this problem for an act theorist, is the path William of Ockham took: claim that intellectual memory is a habit generated precisely on the basis of the intellectual act. (On Ockham's theory of memory, see, e.g., Adams 1987, 515–525.)

4 Peter Auriol

a. Concepts are true particular roses and flowers, indeed not as they exist extramentally, but as they exist intentionally and objectively, and according to formed being they concur in one something without qualification, which is present in the intellect through the intelligible species or through the act. And since it stands to reason that such a something is only in the soul while it is actually understanding, but the intelligible species remains without the act, one can manifestly conclude that such a thing only emanates in being of this kind while it is actually being understood and in the intellection or actual knowledge. (Peter Auriol, *Scriptum super I Sententiarum* 27.2.2; Electronic Scriptum, ll. 520–25; ed. 1596, 624bB)

b. In every intellection there emanates and proceeds nothing other than the cognised thing itself in a certain objective existence through which (*secundum quod*) it serves to terminate the intellect's gaze. (*Scriptum super I Sententiarum* 27.2.1; Electronic Scriptum, ll. 365–66; ed. 1596, 622aF)

c. The objective conception passively taken does not look to the thing as a type of substrate, rather the thing which is conceived is a part of it and is indistinguishably mixed together with it. Thus, the conception of a rose is the same as a rose, and the concept of an animal is the same as an animal. The concept [of animal] certainly holds indistinguishably the realities of all particular animals and a certain way of being, which is intentional, which is nothing else than passive conception. Not that the intellect can accept in a precise way those realities just as they are held in the concept and superextend over them an intentional mode of being or a passive conception ... in fact the intellect cannot distinguish these realities from the conception. But one concept and intention is constituted without qualification, and it cannot be divided. (*Scriptum super I Sententiarum* 23.2.22, ed. Perler in 1994, 248 (= ed. de Rijk 2005, 718.17–719.12))

d. We have to consider that the only absolute the thing put in formed being holds in itself is the reality [of the thing itself]. Thus the thing posited in formed being and its intention do not differ numerically with respect to anything absolute. Nevertheless it holds in itself something respective, namely to appear. That [respective appearing] ought not to be understood as something affixed or superimposed upon the thing, as other relations are, but utterly intrinsic and indistinguishably joined to it. (*Scriptum super I Sententiarum* 27.2.2; Electronic Scriptum, ll. 584–88; ed. 1596, 625aF–bA)

Peter Auriol's act-object theory of intellectual cognition is extremely distinctive and attracted a great deal of attention in the fourteenth century. For Auriol, a concept of, say, Socrates *is* (strict numerical identity) Socrates, differing only in terms of their way of existing, since Socrates has real existence, while a concept of Socrates has intentional existence (or, using a Scotist term, 'objective existence', e.g. **(b)**). And what characterises intentional existence is the fact

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that it appears to a sense or an intellect – hence Auriol’s most characteristic name for intentional existence is ‘apparent being’ (*esse apparens*). Intentional existence, then, simply is the kind of existence which things have when they are being sensed or thought, but the thing in intentional existence does not differ numerically from the thing as it exists in reality (**d**). More particularly, what characterises this type of existence is that it is a particular extramental object, e.g. Socrates, but indistinguishably mixed together with (*indistinctibiliter immiscetur*) passive conception, i.e. the formation of a concept grasping Socrates (**c**). A concept of Socrates, then, is Socrates as conceived, it is Socrates as an object of the intellect. Upon intellectual acquaintance, Socrates as really existing is converted through the act of conception, i.e. by being conceived, into Socrates as intentionally existing. And yet Socrates’ intentional existence is entirely rooted in Socrates himself, since it *is* Socrates; the act of the senses or intellect is merely bringing this intentional existence to actuality by facilitating Socrates appearing to a perceiver or understander. Auriol’s arguments for this position boil down to saying that any concept with its own real being – whether that be a species, an act, or a Platonic form – would stand in the way of our direct cognition of extramental things. Thus, while Auriol does envision a role in the cognitive process for mental representations and ‘intermediaries’ (like species – **a**), nevertheless his goal is to ensure that they play as minor a role as possible in what we actually know (i.e., the thing itself); in a sense, for Auriol, concepts are ‘invisible’, since they merely are the intentionality by which the mind knows the object. (On Auriol’s theory of concept formation, see Friedman 1999, forthcoming-a.)

5 Durand of Saint Pourçain

a. It must be said that sensing and understanding do not indicate anything real over and above the sense or the intellect, that is to say anything making real composition with them, and this is clear in many ways, first from the nature of an operation in its own right and absolutely, as follows. First act is form, just as the intellect in a human being or heat in fire; but second act is operation, e.g., understanding or heating or making hot, and so on about similar things. But operation cannot be a form distinct from [the form] that is the first act, since in that case the operation would not be second act but first. For each and every substantial or accidental form indicates a first act. And further, if the operation were in its own right a form, then it would have an operation, and this would proceed on to infinity, because there would [always] be a form of a form and an operation of an operation. That is why it is better to stop at the first, namely that the form’s operation is not a form added to it. (Durandus de S. Porciano, *Scriptum super IV libros Sententiarum* II.1–5 (156–157, 284–297))

b. Whenever first and second act perfect a thing, not absolutely but in respect to something else ... then the first act bears that respect as a potentiality, but the second act as an actuality, and in such [acts] the thing is not always in first and second act simultaneously, but it sometimes happens that it is in first act without being in second act ... The intellect or the intellectual principle and [the act of] understanding are to be numbered among those sorts of acts, for each [of them] is said not utterly absolutely but in respect to the intelligible, and the intellect bears this respect as a potentiality but [the act of] understanding as an actuality. On account of which, someone with an intellect does not always understand, since an intelligible [object] is not always present to that person. Through what, then, is the power of understanding reduced to its act? It must be said ... through what gives it what is understood per se, because giving what is understood ... gives what is intelligible, because to have an intellect is to understand a present object. But the object presented, or what presents the object, is the cause sine qua non, since understanding is not a strictly absolute perfection, but in comparison to another. (Durand, *Scriptum super IV libros Sententiarum* II.1–5 (160–161, 394–401, 409–421))

c. Beneath each and every genus one finds differentia and impossible species; disparate species beneath one and the same genus are impossible, because among them all there is some contrariety, although indeed not perfect [contrariety], as is clear about white and black and the mediate colours. But among acts of understanding one must assign contrary and impossible ones. Therefore, by a parity of reasoning, all other acts of understanding are impossible. (Durand, *Quaestiones de libero arbitrio* 3 (491, 37–41))

d. Again, when [a number of] things are understood as compared [to one another], then either <1> all of them or <2> none of them or <3> some but not others are understood by a single act. It cannot be claimed that some but not others [are understood by the single act], because there is no greater reason for some [to be understood by that act] than for the others; therefore [it must be] either all or none. <1> If it is all [of them], then I have my point [i.e., the unity theory of the mental proposition is true]. <2> If it is none [of them], then the intellect composing and dividing the predicate with the subject does not do this through one act but through several, namely through an act of an undivided understanding with respect to the subject, and similarly with respect to the predicate. But on the contrary: composition and division do not consist in what is common to composition and division; but composition and division are united in the simple understanding of the terms; therefore, etc. (Durand, *Quaestiones de libero arbitrio* 3 (491, 13–21))

Durand views the concept as the intellectual act itself, and moreover he claims that the intellectual act adds nothing real to the intellect entertaining the act. He offers as an argument for this view his interpretation of the well-known Aristotelian first act/second act dichotomy: the intellect is a form, i.e. first act,

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its operation is second act; but the operation cannot itself be a form or quality (i.e. something with its own real or absolute being), because then the operation itself would be first act and not second act or operation at all, and (we can conclude the argument) we would never actually understand. Moreover, surely if the absolute form as first act had an absolute form or quality as its operation, then this absolute quality would in turn have an absolute quality, and so on ad infinitum **(a)**. That the intellect's act is an absolute accident makes no sense to Durand, and therefore he insists that the intellectual act is a relational accident, and on account of this and of Durand's unusual theory of the ontology of the category of relation, his theory of concepts is extremely distinctive. For Durand, no relational accident has any reality of its own, it is merely a way that its foundation exists, and it takes all the reality it has from its foundation. Thus, the intellect's act, i.e. a concept, since it is a relational accident, is merely a way that its foundation, the intellect, exists **(a-b)**. It follows that the intellect does not gain anything, nor is it altered in any absolute or concrete way, by this act. Indeed, Durand says explicitly **(b)** that the object is a mere sine qua non cause of the intellect's having its act: since 'to have an intellect is to understand a present object', the intellect is 'released' into its activity upon the presentation of an intelligible object, with the result that the object has no absolute effect on the intellect. For Durand, then, a concept merely marks or registers that the intellect stands in a relation to an object. Interestingly, Durand's highly minimalist act theory of the mental word was criticised by Peter Auriol on the grounds that it failed to provide any explanation for intellectual memory. (Hartman 2012; Solère 2013; Friedman forthcoming-b.)

Durand, like nearly all of his contemporaries, held that the intellect can at any one moment entertain only one thought, in other words it can have only one act at a time. The major principle behind this view of Durand's is that each and every intellectual act is totally impossible with each and every other intellectual act, and so there can never be more than one in the same intellect at the same time **(c)**. This has immediate repercussions for the mental proposition: if mental propositions are like spoken or written propositions, then you would expect that a mental proposition would be composed or put together out of several mental acts, each of which takes the place of one or more of the words in the spoken or written proposition. But this is not the case, according to Durand, who articulates a 'unity theory' of the mental proposition: mental propositions are understood at once (*simul*) in one intellectual act, all the 'parts' together in an undivided unity. The gist of his position is as follows. Take any two things which have some kind of order or disposition (*ordo* or *habitus*) to one another. For the intellect to compare those two things – as it does in a mental proposition – it has to understand

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them simultaneously in one act; according to Durand, if each of these things was grasped by its own intellectual act, there would be a cognitive gap (our term) between them, and the intellect could never bridge this gap and hence could never actually succeed in comparing the two.

Durand argues in detail for this position by a process of elimination (**d**). Take several things which are understood as compared to one another in some way, there are only three possible ways these several things can be related to one single act of the intellect: either (1) all of them are understood in one single act or (2) none of them are or (3) some are and some are not. The third option – that some objects are understood by the one intellectual act but some others are not – Durand rejects as being completely arbitrary: why would some be understood in the single act more than the others? If, on the other hand, all of the objects to be compared are understood in a single act – the first option –, then Durand has his point: any comparison between objects of the intellect, including mental predication, takes place through one intellectual act. That leaves, then, the second possibility that none of the objects are understood in one single act, and this is equivalent, Durand tells us, to saying that in mental predication subject and predicate each have their own intellectual act. But that will not work, according to Durand, because composition and division *share* the simple understanding of terms, that is to say, nothing about a term itself decides whether that term appears in a composition or in a division, any given term can appear indiscriminately in either. Durand concludes that, if subject and predicate each had their own intellectual acts, composition and division would never get off the ground, since the terms are common to them both. Thus, claiming that the subject and the predicate each have their own intellectual act gets us nowhere in explaining the comparison made by the intellect when forming a mental proposition: how would we know whether we were affirming the predicate of the subject or denying it. There would be an unbridgeable cognitive gap between the terms, and the intellect could never succeed in comparing them. According to Durand, then, the only possibility is that all the objects which are compared are understood as compared in one single intellectual act. Hence, the unity theory of the mental proposition. (Friedman 2009a, b.)

6 Thomas Wylton

a. That there can be many intellectual acts simultaneously in the intellect is proved first by considering an intellect which, in demonstrating a conclusion, reasons from principles to conclusion; second, the same is proved by considering an intellect

composing and dividing. (Thomas Wylton, *Quod in intellectu possunt esse plures intellectiones simul* (506, 1–4))

b. Considering the reasoning intellect, one argues as follows ... a dialectical syllogism has in common with a demonstration, and moreover with every syllogism which does not err in form, that there is a necessary relation between the premisses and the conclusion. But, a demonstration adds this [feature] to those of syllogisms in general: that not only do the premisses necessarily entail the conclusion but furthermore they are necessary in themselves. And if someone were actually to know a conclusion necessarily, then, against the above mentioned Doctor [i.e., Durand], that person would simultaneously know that he knew the conclusion. Therefore, it is necessarily the case that, at the time that he actually knows the conclusion, he not only understands the premisses insofar as they are related to the conclusion, but he understands that the premisses are true in themselves. For if he did not know this at that time, then he would not know that he knew the conclusion. (Ibid. 507, 36–44)

c. Second, it is argued by considering the composing and dividing intellect ... when dividing or composing one extreme with another [extreme], each beneath their proper concepts, then in just the way the intellect composes them, so it understands them. This is immediately proved because otherwise no intellect would know whether it composed truly or falsely. But, when composing ‘man’ with ‘animal’, the intellect composes one extreme with the other extreme, beneath the proper concepts of [these] extremes. And, in the same way when it divides ‘man’ from ‘ass’, it divides ‘man’ beneath its proper concept from ‘ass’ beneath its proper concept. Therefore, at that instant, it understands each beneath its proper concept and if this is so, it will be through different intellectual acts. (Ibid. 507, 45; 508, 18–24)

d. But this comparative act comprehends within itself the two simple [acts] through which the intellect understands each of the extremes and it compares the extremes to each other under their proper concept. (Ibid. 511, 24–26)

It appears that in the medieval university context, Thomas Wylton was the first to hold that the human intellect in this life can have more than one act at a time (**a**) and the closely linked view of the ‘compositional’ nature of the mental proposition. Wylton put forward various arguments for these views. He remarks that since we know that we have some demonstrative knowledge, we must be able to have more than one intellectual act at a time, since all at once we must actively know each of the two necessary premisses *and* the conclusion, and hence have three intellectual acts at once (**b**). Furthermore, the intellect when composing or dividing a mental proposition must actively understand at once both predicate and subject under their own proper concepts and hence have at

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least two acts in the intellect at once (**c**). In fact, Wylton claims (**d**) that in a proposition the intellect has a comparative act which comprehends the simple acts of the extremes and compares the extremes to each other. Thus, parallel to Wylton's argumentation in (**b**), here you have to know something actively about each term and not just their relation to each other, and this requires having more than one intellectual act at once. Just as importantly, here Wylton clearly articulates his compositional view of the mental proposition, i.e. the view on which a mental proposition requires at least three acts in the intellect simultaneously, two of those acts corresponding to the terms of the proposition, and a third act, the 'comparative act', functioning as the mental copula (**d**). This view of the proposition is different from, e.g., the famous thirteenth-century logician, Peter of Spain's view, on which a categorical proposition is a composite of two principal parts, the subject and the predicate ('A categorical proposition is a proposition which has a subject and a predicate as its principal parts, as in "man runs"'; *Tractatus* I.6 (3, 25–26)). The three-part view of the proposition which Wylton championed will also be defended by, among others, John Buridan; see *Summulae* 1.3.2: 'A categorical proposition is one which has a subject, a predicate, and a copula as its principal parts' (John Buridan, *Summulae: De propositionibus* (31, 22–27)). (Friedman 2009a, b; on Peter of Spain and Buridan, see Maierù 2004, 41–43, Pérez-Illarbe 2004, 154–156.)

7 Some Fourteenth-Century Theories of Mental Language

a. ... it can be said otherwise, with some probability, that the universal [i.e. concept] is not something real having subjective being either in the soul or outside of the soul but only has objective being in the soul. It is a kind of *fictum* having the kind of being in objective being that the external thing has in subjective being. (William of Ockham, *Ordinatio* 2.8 (OTh 2, 271, 14–272, 2))

b. There can be another opinion, which I think is probable: that the impressions of the soul are certain qualities of the intellect existing subjectively in the mind truly and really just as whiteness exists in a wall or cold in water. (William of Ockham, *Expositio Perihermenias*, prooemium 9 (OPh 2, 363, 4–7))

c. ... just as Boethius notes in book 1 of *De interpretatione* that there are three types of discourse, namely written, spoken and conceptual – which only has being in the intellect –, so there are three types of term: written, spoken, and conceptual. A written term is a part of a proposition which is or can be seen by the bodily eye once it has been inscribed on something material. A spoken term is a part of a

proposition uttered by the mouth and apt to be heard by the bodily ear. A conceptual term is some intention or passion of the soul which, naturally signifying or co-signifying, is apt to be a part of a mental proposition and to supposit for [what it signifies]. For this reason, these conceptual terms and the propositions composed of them are called mental words by the blessed Augustine in c. 15 of *De Trinitate* and he says they belong to no language. For, they are only in the mind and cannot be uttered aloud although the spoken words which are subordinated to them as signs are uttered aloud.

I say that spoken words are signs subordinate to concepts or intentions of the soul not because they always signify the concepts of the soul primarily and properly in the proper sense of ‘signs’ but because spoken words are imposed to signify the very same things which are signified by mental concepts. That is, a concept primarily and naturally signifies something and a spoken word signifies the same thing secondarily insofar as the spoken word is instituted to signify what is signified by the mental concept. If that concept were to change its signification, by that fact alone the spoken word would change its signification without any new [linguistic] institution ...

Now, there are some differences amongst these terms. One is that a concept or a passion of the soul naturally signifies whatever it signifies but a spoken or written term only signifies [what it signifies] conventionally. From this difference follows another, namely that the signification of a spoken or written term can be changed at [the language users’] will, whereas the signification of a conceptual term cannot be altered at the will of anyone. (William of Ockham, *Summa logicae* I.1 (Oph 1, 7–8, 13–52))

d. I say that just as spoken and written terms are certain names, verbs, pronouns, participles, adverbs, conjunctions, and prepositions, so too certain mental concepts are names, verbs, adverbs, conjunctions, and prepositions. This is clear from the fact that a mental proposition composed of concepts corresponds to every true or false spoken expression. Therefore, just as the parts of a spoken proposition which are imposed to signify things are distinct parts on account of a requirement of signification or expressiveness – since it is impossible to express by verbs and names alone what can be expressed by all the other parts of speech – so too the parts of a mental proposition which correspond to the spoken [parts] are distinct so that they can form distinct true and false propositions. (William of Ockham, *Quodlibeta septem* V.8 (OTh 9, 509, 12–26))

e. ... the union of the extremes in the mind is the concept of the copula, and this is a certain quality of the mind, namely an act of understanding. And this concept is really distinct from the subject and the predicate, which are also diverse acts of understanding. (William of Ockham, *Quodlibeta septem* VI.29 (OTh 9, 695, 43–45))

f. ... we should remember that which was said earlier, namely that categorematic words, which are apt to supposit, signify things by means of their concepts [and it is] according to these concepts or similitudes that they were imposed to signify. Thus, in the present passage, we call those things that are conceived by these

concepts the ‘ultimate significata’ but we call the concepts the ‘immediate significata’. (John Buridan, *Summulae: De suppositionibus* 39, 13–18)

g. In a different way, others [e.g. Ockham] call supposition ‘simple’ when a term supposit for the concept according to which it is imposed, and material when it supposit for itself or another similar to itself. And this can be allowed but I do not care because I call both ‘material supposition’. (John Buridan, *Summulae: De suppositionibus* 39, 5–8)

h. ... yet a mental proposition consists of a combination of concepts; for that reason, it presupposes simple concepts in the mind and to these it adds a combinational concept by which the intellect affirms or denies one of these concepts of another. Thus, these presupposed concepts are the subject and predicate of a mental proposition and they are called the matter of the mental proposition because they are presupposed by the form of the proposition just as matter is presupposed by the substantial form in generation. (John Buridan, *Summulae: De propositionibus* (31, 5–12))

i. Perhaps it might be responded [to the unity theory of the mental proposition] that, although the parts of such [mental] propositions are similar and [are] even in the same primary subject [i.e. in the intellect], nevertheless different propositions are formed by virtue of differing orders in the production of their [parts] and the subject in one [mental proposition] is not the same in terms of species as it is in another, but something similar to that which is the subject in the one [proposition] is the predicate in the other; similarly, the part of the same proposition which is produced first is the subject, but [the part] produced afterwards is the predicate. – This response does not hold because this kind of successive production is irrationally posited, for since there can be, and be produced, in the intellect several acts of differing natures [at once], as will be shown in the first distinction [of this first book of the *Sentences*], it would indeed be strange if [the intellect] were not able to produce one whole proposition at once. (Gregory of Rimini, *Lectura super primum Sententiarum*, prologus 1 (34, 14–23))

Early in his career, Ockham argued for the so-called *fictum* or objective-existence theory of concepts. Essentially an act-object theory, Ockham conceived of concepts as the objects of intellectual acts which have the mind-dependent existence of being thought, a non-real kind of existence which he called ‘objective’ (**a**). In a middle period, Ockham hesitated between this first theory, a second theory (not much discussed by Ockham) identifying concepts as distinct from acts of understanding but real qualities of the soul nevertheless, and a third theory which he eventually and wholeheartedly endorsed. On this final mature theory, an act theory, concepts are identified as

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intellectual acts themselves and are real ‘subjectively’ existing qualities of the soul (by ‘objective’ and ‘subjective’, Ockham means roughly the opposite of what these terms mean today) **(b)**. The concept of cat is just thinking-of-cats. The objects of intellectual acts, i.e. of concepts, are those individual entities that concepts apply to.

Ockham approves of Boethius’s division between three ordered kinds of discourse: spoken, written, and mental **(c)**. The terms of spoken and written languages are outwardly perceptible; they are utterances and markings. The terms of mental language are internal intentions or impressions of the soul, namely concepts. All three terms signify things. Yet, concepts, that is mental terms, signify things *naturally* whereas spoken and written terms signify things *conventionally* or derivatively. Ockham thinks that concepts are natural signs because they are the result of a psycho-physical causal process, engendered by our direct experience of the singular objects that they are signs of. Spoken and written terms are, as Ockham puts it, ‘instituted at the will’ of the users of a particular language, i.e. English or Latin, to signify what they signify by virtue of having been subordinated to or associated with a given concept. Spoken and written terms inherit their signification from the conceptual terms that they are associated with but still immediately signify things. Consequently, the terms of spoken and written languages, often called ‘conventional languages’, are diverse and mutable while conceptual terms are uniform across all languages. As the subject and predicate terms of mental propositions which have a determinate signification (i.e., categorematic terms), concepts acquire the feature of supposition. Supposition circumscribes what the terms of a given proposition refer to, which is context-sensitive and dynamic; it is, therefore, crucial for establishing the truth conditions of propositions. Ockham identifies three forms of supposition. First, in personal supposition and its many modes, terms supposit for what they signify, e.g. the term ‘horses’ in ‘horses are four-legged’ refers to horses. Second, in simple supposition, the terms supposit for a concept, e.g. the term ‘human being’ in ‘human being is a species’ refers to the concept of human being. Third, in material supposition, the terms supposit for spoken or written words, e.g. ‘man’ in ‘man is a three-letter word’ refers to the English word ‘man’. Concepts, as the terms in mental propositions, can supposit for what they signify (personal supposition), for themselves (simple supposition), and for spoken or written words (material supposition).

Mental language has a sophisticated grammatical structure which differs somewhat from that of conventional language **(d)**. It includes all those elements which affect the truth value of a proposition, namely: nouns and adjectives (‘names’ to Ockham), verbs, adverbs, prepositions, conjunctions,

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and logical particles such as ‘all’, ‘no’, ‘some’, ‘because’, etc., as well as the copula. Such logical particles are known as syncategorematic terms and they have no independent signification but serve to structure and modify the signification of the terms within propositions which do (the categorematic terms). Various grammatical accidents are present in mental language, e.g. the case and number of nouns, the number, mood, and tense of verbs. Excluded from mental language but nonetheless found in conventional language are all cases of synonymy including pronouns which redundantly refer to their antecedent nouns and participles which are eliminated in favour of verbs. The grammatical accidents of gender, declension, conjugation, and inflection are also absent from mental language. Ockham usually subscribes to the view that a mental proposition is composed of categorematic conceptual terms (subject and predicate) and any given number of syncategorematic terms, including a copula. The structure of a mental proposition is largely mirrored by the structure of the corresponding proposition in conventional language, with the above noted exceptions. Propositions, both in mental and conventional language, signify the entirety of what their terms signify. According to Ockham, they do not signify facts or states of affairs but rather the individual entities which their component terms signify. All of this intricate theory concerning the structure of mental language would lead us to deduce what elsewhere Ockham explicitly claims (e): that he holds a compositional theory concerning the nature of the mental proposition, according to which a mental proposition is composed of subject, predicate, and copula, each of them a distinct quality of the mind, i.e. a distinct mental act. (See, e.g., Pasnau 1997, 277–289; Panaccio 2004.)

Buridan argued, unlike Ockham, that spoken and written words immediately and directly signify the concepts that they are subordinate to although they ultimately signify the very things that are conceived by concepts (f). Concepts, according to Buridan, are the means by which spoken and written words signify what they signify. In this regard, Buridan adopted the more traditional and majority position, stemming from Boethius, that spoken and written words immediately signify concepts and mediately signify things by way of concepts.

A second divergence between Ockham and Buridan lies in their treatment of supposition and its relevance for mental language. Buridan, unlike Ockham, admits only personal and material supposition, the latter of which for Buridan subsumes what Ockham had called simple supposition (g). Furthermore, Buridan excludes material supposition from mental language: mental terms only have personal supposition. Whereas for Ockham a mental term can simply supposit for itself as a concept, for Buridan a mental term can only

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personally supposit for what it signifies. Thus, according to Buridan, the spoken word (utterance) ‘human being’ in the spoken proposition, ‘human being is a species’ materially supposits for the concept of a human being. In the corresponding mental proposition, the term ‘human being’ is a concept which personally supposits for the concept of human being, it does not simply supposit for itself as Ockham maintains. One advantage of Buridan’s approach, often pointed out in the literature, is that in eliminating material supposition from mental language, Buridan leaves no room for any ambiguity in mental language: its terms can only ever supposit for what they signify and nothing else. It should be added that Buridan (**h**), like Ockham (and Wylton), opts for a compositional view of mental language on which the mental proposition is composed of a concept of the subject and a concept of a predicate which act materially with respect to the intellect’s formal act of affirming or denying the predicate of the subject.

Gregory of Rimini argues for a unity view of mental language because he denies that, in an immaterial substance like the intellect, an order could be introduced into the components of a mental proposition, corresponding to the order in written or spoken propositions, such that one component served as subject and another as predicate, or the very same terms can be used to form distinct mental propositions. Rimini gives a possible counterargument (**i**): the mental proposition formed is determined by the temporal or logical order in which the terms are produced. Rimini answers this possible criticism basically by saying that it is simply more plausible to hold his own unity thesis of the mental proposition, since the type of successive productions of the terms advocated in the counterargument is irrational. The discussion does not end here: Gregory’s version of the unity theory of the mental proposition formed the point of departure for early sixteenth-century discussions on the issue. (See e.g. Klima 2009, 37–120.)

Chapter 25

Early Modern Psychology of Language

Simo Knuuttila

In the sixteenth and seventeenth centuries, the dominant conception of spoken language followed the Aristotelian view that categorical words are conventional. They signify things in the world in accordance with the concepts of the mind, the signification of which is established naturally. Thus the significant use of language was taken to require reason and was consequently not possible for animals, whose communication was limited to expressing their passions through natural voices and gestures. These were not taken to form a language except by a small group of authors from Montaigne to Cureau de la Chambre and Gassendi, who sought to belittle the difference between humans and animals. Paracelsus and other occultists argued that the creator of the world had provided things with signifying signs which revealed their nature and possible effects on those who had learned to read this language. The interest in magical mastering of things by their original names led to speculations about non-conventionally signifying words in Adam's proto-language (1).

While the medieval doctrine of speculative grammar was known in the sixteenth-century through several prints of Thomas Erfurt's *Grammatica speculativa* and some other medieval treatises, it was of little importance in philosophical discussions. William of Ockham argued that thinking had the structure of non-conventional mental language which was explanatorily prior to spoken and written language. This theory was influential in late medieval philosophy and continued to be discussed by authors of the second scholasticism. The notions of mental discourse and mental words were employed in the psychology of language even later when

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the conception of a detailed mental language had lost its attraction. Hobbes, Locke and many other seventeenth-century philosophers who spoke about mental discourse or mental propositions assumed that there was a mental power for thinking and another ability for ordinary language which presupposes the previous one (2).

Renaissance humanism was a philologically oriented movement which was particularly interested in poetry and rhetoric and the affective influence of spoken and written presentation. Many humanists argued for the value of eloquence as providing emotional support for good practices. The criticism of the power of language over thought was developed by Francis Bacon, Locke and some others (3). These issues were related to spoken and written languages which were also attended by seventeenth-century attempts to introduce artificial languages. Following the usual view that ordinary languages are useful for thinking and communication, Dalgarno and Wilkins tried to develop new languages which would be close to the universal mental patterns of thinking and make communication between people with different native languages easy. These works were not successful, but they inspired Leibniz, who entertained a life-long project of developing a universal philosophical language for advancing scientific progress (4). The new question in the eighteenth-century psychology of language concerned the hypothetical theories of how language might have developed from an original state in which humans did not yet have it. Condillac's influential theory was the starting-point for somewhat different views of Rousseau and Herder (5).

1 The Language of Humans, Animals and Other Creatures

a. Concepts are natural similitudes to things through which those things are signified. Because human beings cannot live together without interpreting their thought for others, nature has provided them with words, that is, the faculty of forming words through which their thoughts are signified to others ... while concept signify things in a direct way, words are invented to signify things as understood by the concepts. Therefore they signify things through intervenient concepts, indicating which is the concept of things signified by a word which is had or should be had by the one who puts forward the word. (*Collegii Conimbricensis Commentarii in universam logicam Aristotelis* (Hamburg 1604), 194)

b. Because humans are social animals by nature and living in a society is not possible without speech, this is said to be natural for them ... humans make use of arts and reason by which they produce speech for themselves, whereas brutes have only the voices which they receive from nature, and they do not institute voices for signifying ... when brutes produce a voice on the basis of the affect of pain, neither do they apprehend pain nor does their voice signify their apprehension. (*Commentarii Collegii Conimbricensis in universam dialecticam Aristotelis* (Coimbra 1606), II, I.4.2 (43–44))

c. He refers to the passions in the soul because, as will be explained below, words signify things as they are understood by the intellect and indicate its concepts. For this reason there the voices of animals are excluded here because they could not express such passions, as well as human voices by which we express natural affects. (Franciscus Toletus, *Commentaria una cum quaestionibus in universam Aristotelis logicam* 1578 (115va–b))

d. For what is that faculty we see in them [animals] when they seeme to complaine, to rejoyce, to call one unto other for helpe, and bid one another to loving copulation (as they commonly doe) by the use of their voice, but a kind of speech? And shall not they speake among themselves, that speake and utter their minde unto us, and we to them. (Montaigne, *Essays*, trans. J. Florio (1603), vol. II (152))

e. For it is remarkable that while there are no men so dull and stupid, not even madmen, who would not be capable of arranging different words together and composing utterances which make their thoughts understood, there is no other animal, however perfect or well-endowed, which does the like. This does not arise from their lack of organs, for we see that magpies and parrots can utter words like ourselves, and yet they are unable to speak as we do, that is, so as to show that they are thinking what they are saying ... And we should not confound speech with the natural movements which express passions and can be imitated by machines as well as by animals; nor should we think like some of the ancients that the animals speak, although we do not understand their language. For if that were true, since they have many organs similar to ours, they could as easily make themselves understood to us as to their fellows. (Descartes, *Discourse of the Method* 5, AT VI 58)

f. Thus there are two Books from whence I collect my Divinity – besides that written one of God, another of His servant Nature; that universal and publick Manuscript, that lies expans'd unto the Eyes of all, those that never saw him in the one, have discovered him in the other. This was the Scripture and Theology of the Heathens; the natural motion of the Sun made them more admire him, than its supernatural station did the Children of Israel; the ordinary effects of nature wrought more admiration in them than in all the other his Miracles: surely the Heathens knew better how to joyn and read these mystical Letters, than we Christians, who cast a more careless eye on these common Hieroglyphicks, and disdain to suck divinity from the flowers of Nature. (Thomas Browne, *Religio Medici* (first part, 33–34))

g. Adam, our first father, knew and understood these names completely, for immediately after the creation he gave all things their own and special name, to all animals their special name, to all trees their special name, to herbs special and different names, to roots their special name, and so to stones, ores, metals, waters and all other fruits of the earth, the water, the air and the fire their own special name. God was very pleased with how Adam baptised and named things, for it took place on the right basis, not arbitrarily, but on the basis of the predetermined art, namely the art of *signata*. For this reason Adam was the first *signator*. (Paracelsus, *De signatura rerum naturalium*, ch. 9 in *De natura rerum* (397))

The commentaries on Aristotle's *De interpretatione* quoted above (a, b) formulate the standard early modern view of language which follows Aristotle in assuming that human beings make use of naturally signifying concepts. Various languages are conventional tools of communication, having words which signify things in the world as understood through the concepts. The first commentary, published in several places in 1604, was attributed to the Conimbricenses, the group of Jesuit professors at the University of Coimbra which produced an influential series of commentaries on Aristotle's works. While this work was based on logic teaching at Coimbra, it was criticised as being fraudulently produced in the introduction to the 'official' Coimbra commentary from 1606 edited by Sebastian Couto. The detailed discussion of various signs in chapter 1 of this work, influenced by Domingo de Soto, was among the sources of the *Cursus theologicus* of John of St Thomas (John Poincot) whose remarks on signs are considered interesting from the point of view of contemporary semiotic theory. See Ashworth 1988.

It was assumed in the commentaries quoted above and in many other works that while animals may use signs for various purposes, their voices are natural and non-conventional signs which do not refer to concepts. Animals do not have the intellect which is required for an Aristotelian language (c). Michel Montaigne, who wanted to question the sharp divide between humans and animals, was interested in putting forward examples of animal behaviour, mostly collected from ancient literature, which seem to suggest animal rationality and linguistic communication (d). Some seventeenth-century authors continued along the same lines, the best known of them being Cureau de la Chambre and Pierre Cassendi. This remained a minority view, however. Descartes's discussion of the theory exemplifies standard reasons for scepticism towards animal language (e). See Serjeantson 2001.

Paracelsus and some others interested in occult powers believed that the creator had provided natural things with special signs which indicate their possible uses in medicine and technology. Thomas Browne, a seventeenth-century paracelsist physician, refers to these signatures as the special language of nature (f). Paracelsus himself or one of his followers describes Adam's proto-language in which the words express the essence of things (g). Thomas Browne writes that 'by this Alphabet Adam assigned to every creature a name peculiar to its Nature' (*Religio medici*, second part, p. 68). Knowing this language would help one to master the secret powers of nature. For signs and language in occultist thought, see Bono 1995.

2 Mental Language, Ideas, Concepts

a. The word is through which we say something, and we say something just through the act and its object; therefore, the word is nothing but the act and its object. The minor premise is proved: saying is nothing other than to propose and indicate a thing through the intellectual power, as is clear in vocal speaking which is nothing but a manifestation of concepts; but the intellectual act with its object make the thing manifest to the intellect; therefore the intellect says something through it. (Petrus Hurtado de Mendoza, *Disputationes de universa philosophia* (792))

b. The word can be known as ‘that through which’ or as ‘that’; in so far as it has its proper immateriality and cognoscibility, it is known as ‘that’, and in so far as it is an intentional form and an image of an object, it is known as ‘that through which’, for in this way it is that through which an object is known. (Gabriel a Sancto Vincentio, *In libros Aristotelis ... De anima* (444r))

c. A notion can be understood as an act or as a habit. The latter is, so to say, a permanent light of the mind which we can use when we will, but let us speak about the act. This notion is the act of the mind through which it grasps a thing, as if forming an image of that which it cognises, and these images or ideas are not different from the act of intellection. (Philipp Melanchthon, *Liber de anima* (145))

d. The first opinion is that of William of Ockham ... and the common modern way of thinking according to which a complex propositional apprehensive notion is really distinct from an adhesive notion. This is proved in many ways. First, while such an apprehensive notion is a mental conclusion which is constituted in a subject and a predicate which are related to each other by a combining or dividing act, the adhesive notion is the acceptance of this mental proposition which acceptance is one simple quality in the soul ... The second opinion is that of Gregory of Rimini ... that the assent is the mental proposition itself; therefore he does not assume a real distinction between apprehensive and adhesive notion ... Against the first opinion he argues that that a mental conclusion is not composed of partial simple notions of which one is the subject and the other is the predicate, for the acts of composition or division of the intellect are not complex in a true sense, as many people think, but only because they as signifying are equivalent to the plurality of words composing a spoken or written proposition. (Bartholomeus of Usingen, *Parvulus philosophiae naturalis* (115r–v))

e. An apprehensive proposition is one simple act of the intellect, that is, when the intellect apprehends this proposition, it apprehends the whole proposition through one act. Notice that I do not deny that it does not have beforehand single acts of single terms and signified things, for the intellect is aware beforehand of ‘man’, ‘animal’ and ‘est’ through single concepts, but none of these alone nor all together apprehends the whole thing or proposition, except through one other supervenient act. (Franciscus Toletus, *Commentaria in De anima* III (161a))

f. The invention of *Printing*, though ingenious, compared with the invention of *Letters*, is no great matter ... But the most noble and profitable invention of all other, was that of SPEECH, consisting of *Names* or *Appellations*, and their Connexion; whereby men register their Thoughts; recall them when they are past; and also declare them one to another for mutual utility and conversation; without which, there had been amongst men, neither Common-wealth, nor Society, nor contract, nor Peace, no more than amongst Lyons, Bears, and Wolfes ... The general use of Speech, is to transerre our Mentall Discourse, into Verbal; or the Trayne of Thoughts, into a Trayne of Words; and that for two commodities, whereof one is Registering of the Consequences of our Thoughts; which being apt to slip out of our memory, and put us anew labour, may again be recalled, by such words as they were marked by ... Another is, when many use the same words, to signifie (by their connexion and order) one to another, what they conceive, or think of each matter; and also what they desire, feare, or have any other passion for, and for this use they are called Signes. (Hobbes, *Leviathan* IV.12–13)

g. To form a clear notion of truth, it is very necessary to consider truth of thought, and truth of words, distinctly one from another: but yet it is very difficult to treat of them asunder. Because it is unavoidable, in treating of mental propositions, to make use of words: and then the instances given of mental propositions cease immediately to be barely mental, and become verbal. For a mental proposition being nothing but a bare consideration of the ideas, as they are in our minds, stripped of names, they lose the nature of purely mental propositions as soon as they are put into words.

And that which makes it yet harder to treat of mental and verbal propositions separately is, that most men, if not all, in their thinking and reasonings within themselves, make use of words instead of ideas; at least when the subject of their meditation contains in it complex ideas ... For if we will curiously observe the way our mind takes in thinking and reasoning, we shall find, I suppose, that when we make any propositions within our own thoughts about white or black, sweet or bitter, a triangle or a circle, we can and often do frame in our minds the ideas themselves, without reflecting on the names. But when we would consider, or make propositions about the more complex ideas, as of a man, vitriol, fortitude, glory, we usually put the name for the idea: because the ideas these names stand for, being for the most part imperfect, confused, and undetermined, we reflect on the names themselves, because they are more clear, certain, and distinct, and readier occur to our thoughts than the pure ideas: and so we make use of these words instead of the ideas themselves, even when we would meditate and reason within ourselves, and make tacit mental propositions. (Locke, *An Essay concerning Human Understanding* IV.5.3–4)

Hurtado de Mendoza follows the late medieval tradition of mental language as many other Jesuits did. He is speaking about categorical mental words (names). These are acts of the mind which are naturally directed to objects and they form the basis of the significant use of spoken and written language (a).

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The alternative view was that mental concepts were images and that thinking is basically pictorial rather than inner speech, as is explained by Gabriel a Sancto Vincentio, a seventeenth-century Thomist thinker (**b**). An earlier formulation of the same view is found in Philipp Melanchthon's influential treatise on the soul (**c**). For these alternatives, see Meier-Oeser 2004.

Ockham regarded mental propositions as aggregates of mental acts, the grammar of which was provided by logic. Bartholomeus of Usingen tells that this was a common view of mental propositions in his time and that the assent to an apprehended proposition was regarded as a separate act. He also describes the view of Gregory of Rimini who questioned Ockham's position and argued that mental propositions were single non-complex acts of assent (**d**). An influential part of Gregory's criticism was that the aggregate theory, which operated with simultaneous acts, could not explain why the simultaneous acts corresponding to the words in 'All humans are animals' signify the same as this natural language proposition and not the same as 'All animals are humans'. In the sixteenth century, Gregory's view gained more popularity and was defended by influential authors such as Domingo de Soto, Franciscus Toletus, and Francisco Suárez (**e**). The idea that a mental proposition is one mental act continued to be defended in the seventeenth century; it implied, however, that the interest in the structures of the language of thought declined. (See Ashworth 1981, 1982; Nuchelmans 1980.) In spite of this, many thinkers assumed that spoken language expressed mental concepts, ideas or propositions, not merely tacit speech. Similarly ordinary language, while basically a tool for communication, was also used in thinking, as was explained by Hobbes and Locke (**f-h**); cf. **4b** below. See Pettit 2008 for Locke.

3 The Power of Words

a. It is one thing to know, another to love, one thing to understand, another to will. He [Aristotle] teaches what virtue is, no doubt, but his teaching lacks words, or has very little of them, which sting and set on fire and urge to love virtue and hate vice. (Petrarch, *De sui ipsius et multorum ignorantia* (68))

b. It is well said that dialectic proposes bare things, while rhetoric adds, so to say, the vesture of elocution ... the purpose of dialectic is to teach; rhetoric aims to move and motivate minds and to lead them to affects. For example, when we deal with the nature of virtue, dialectic tells what it is and shows which are its parts, causes and effects. But when we exhort people to virtue, we should follow the loci of rhetoric. (Philipp Melanchthon, *Elementorum rhetoricæ* I, *discrimen dialecticæ et rheroricæ*)

c. I conclude, therefore, that the excelleth history, not only furnishing the mind with knowledge, but in setting it forward to that which deserveth to be called and accounted good: which settling forward, and moving to well-doing, indeed setteth the laurel crown upon the poets as victorious, not only of the historian, but over the philosopher, howsoever, in teaching, it may be questionable. (Sir Philip Sidney, *The Defence of Poesie* (33–34))

d. There are also idols formed by the agreements and associations of men with each other, which I call idols of the market place, on account of the commerce and consort of men there. For men associate by talking, and words are imposed according to common folk; poor and unfit choice of words amazingly obstructs the understanding. The definitions or explanations by which learned men sometimes want to guard and defend themselves do not set the matter right, but words plainly force and overrule the understanding, throw everything into confusion, and lead men away into countless empty controversies and idle fancies. (Francis Bacon, *The New Organon* I.43)

e. Some confused or obscure notions have served their turns; and many who talk very much of religion and conscience, of church and faith, of power and right, of obstructions and humours, melancholy and choler, would perhaps have little left in their thoughts and meditations if one should desire them to think only of the things themselves and lay by those words with which they so often confound others, and not seldom themselves also. (Locke, *An Essay concerning Human Understanding* IV.5.4)

f. We often mistakenly believe that we have ideas of things in mind when we mistakenly suppose that we have already explicated some of the terms we use ... for often we do understand in one way or another each single word or remember that we understood them previously. But since we are content with this blind thinking and do not sufficiently pursue the analysis of notions, it happens that a contradiction which might be included in a complex notion is concealed from us. (Leibniz, *Meditationes de cognitione, veritate et ideis*, ed. Gebhardt, vol. IV (424))

Petrarch and other humanists stressed that eloquence is particularly useful because literary works and orators may influence the emotions of people in a way which supports their striving for good life (a). Melanchthon repeats this view in his treatise on rhetoric (b). Sir Philip Sidney, an English courtier of the Elizabethan age, defends the value of poetry on the same lines (c). For Renaissance rhetoric and poetry, see Vickers 1988; for the influence of rhetoric tradition on protestant theology of faith and affect, see Stolt 2000.

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The question of rhetorical emotions was already discussed by Aristotle, as was the question of the power of language which was considered by some early modern philosophers. Aristotle deals with the mistakes of arguments caused by language in his *Sophistical refutations*; in his famous doctrine of the idols, Bacon includes all sorts of false notions learned in the market-place and uncritically repeated when the power of language overrules understanding (**d**). Locke and Leibniz similarly refer to false beliefs based on an uncritical trust on words (**e-f**).

4 Artificial Languages

a. In this language all elegance is based on the fact that the external logos is fully in accord with the internal one, so that speaking is in itself a logical analysis of our concepts, and no one can speak ornately and elegantly in this language, and fashion discourse in it, unless he is a good logician who knows how to resolve it into its parts. (Dalgarno, *Ars signorum* (68))

b. As men do generally agree in the same Principle of Reason, so do they likewise agree in the same Internal Notion or Apprehension of things. The External Expression of these Mental notions, whereby men communicate their thought to one another, is either to the Ear, or to the Eye ... That conceit which men have in their minds concerning a Horse or Tree, is the Notion or mental image of that Beast, or natural thing, of such a nature, shape and use. The Names given to these in several Languages, are such arbitrary sounds or words, as Nations of men have agreed upon, either casually or designedly, to express their Mental notions of them ... So that if men should generally consent upon the same way or manner of Expression, as they do agree in the same Notion, we should be freed from that Curse in the Confusion of Tongues, with all the unhappy consequences of it. (Wilkins, *An Essay towards a Real Character and a Philosophical Language* (21))

c. But as I have said personally to Robert Boyle and Henry Oldenburg, it seems that these excellent men [Dalgarno and Wilkins] have not completely grasped the magnitude or the true use of the project. For their language or notation only accomplishes that people who speak different languages can easily communicate, but the true Real Characteristic, as I conceive it, must be accounted one of the most effective instruments of the human mind, having an immense power for discovery, retention and judgement. For it will achieve in every subject matter, what is done by arithmetic and algebraic notation in mathematics. And the experts know well how great their power is and how admirable their use. (Leibniz, *Sämtliche Schriften und Briefe* VI.3 (170))

The proposals for artificial languages by George Dalgarno (1661) and John Wilkins (1668) are based on the view that spoken and written languages express the results of mental thinking and serve as tools for communication. Their language plans reflect their views of the universally valid mental categories and principles of thought which the new language should express as closely as possible (a-b). Leibniz was one of the few people showing any serious interest in these works. His own project was to develop an exact language for increasing scientific knowledge, which would function analogously to mathematical calculi. He thought that this would be an extremely useful instrument for the scientific community (c). Even though this plan involved the ideal of a mechanistic calculus for symbols expressing the scientific definitions of things, Leibniz did not think that this would be a suitable model for the psychology of human thinking in general. For seventeenth-century interest in artificial languages, see Maat 2004; see also p. 355 above. For Leibniz's view of language, see Rutherford 1995.

5 The Origin and Evolution of Language

a. God, having designed man for a sociable creature, made him not only with an inclination and under a necessity to have fellowship with those of their own kind, but furnished him also with language, which was to be the great instrument and common tie of society. Man, therefore, had by nature his organs so fashioned, as to be fit to frame articulate sounds, which we call words. But this was not enough to produce language; for parrots, and several other birds, will be taught to make articulate sounds distinct enough, which yet by no means are capable of language. Besides articulate sounds, therefore, it was further necessary that they should be able to use these sounds as signs of internal conceptions; and to make them stand as marks for the ideas within their own mind, whereby they might be made known to others, and the thoughts of their minds be conveyed from one to another ... language had yet a further improvement in the use of general terms, whereby one word was made to mark a multitude of particular existences, which advantageous use of sounds was obtained only by the difference of the ideas they were made signs of, those names becoming general, which are made to stand for general ideas, and those remaining particular, where the ideas they are used for are particular. (Locke, *An Essay concerning Human Understanding* Essay III.1.1–3)

b. The same circumstances could not be frequently repeated without habituating humans to connect the cries of the passions and different motions of the body to the perceptions which were expressed in so sensible a manner. The more familiar they became with the signs, the more readily they were able to revive them at will. Their memory began to have some exercise and they became able to command their imagination. Thus little by little they learned to do by reflection what they had

formerly done by instinct only ... When speech succeeded the language of action, it retained its character. This new method of communicating our thoughts could not be contrived except on the pattern of the first. (Condillac, *Essai sur l'origine des connaissances humaines* I.2.1; I.2.3)

c. I shall take the liberty for a moment to consider the perplexities of the origin of languages. Here I could simply quote or repeat Abbe de Condillac's investigations on this question, all of which fully confirm my own view and may have provided it with its first idea. But because the manner in which this philosopher solves the difficulties of his approach concerning the origin of conventional signs shows that he supposes what I question, that is, some sort of society already established among the inventors of language, I think that I ought to add my own reflections to his in order to expose these same difficulties in the light suitable to my subject. The first difficulty which arises is how languages could have become necessary; for if people had no relations with one another and no need for them, one cannot conceive neither the necessity of this invention nor the possibility of it, if it was not indispensable ... Man's first language, the most universal, most energetic, and the only one he needed before it became necessary to persuade assembled men, is the cry of nature ... It was finally decided to substitute for it the articulations of the voice which, without having the same relation to some ideas, are more suitable to represent them all as instituted signs, a substitution which could only be made by common consent, which men whose crude organs had no practice must have found difficult to do, and it is even more difficult to conceive in itself, since this unanimous agreement must have been motivated, so that speech seems to have been very necessary in order to establish the use of speech. (Rousseau, *Discours sur l'origine et les fondements de l'inégalité parmi les hommes* (76–79))

d. It is argued that men invented speech to express their needs. This seems to me an untenable opinion. The effect of the first needs was to separate men and not to reunite them ... Not hunger and thirst, but love, hatred, pity, and anger drew the first words from them ... for moving a young heart, or pushing back an unjust aggressor, nature dictates accents, cries, complaints. There we have the oldest invented words; therefore languages were songlike and passionate before they became plain and methodical. (Rousseau, *Essai sur l'origine des langues* 2)

e. Man shows reflection when the power of his soul is freely active so that it can isolate one wave in the ocean of sensations rushing through all senses; so to say, arrest this wave, direct its attention to it and be conscious of attending to it ... He shows reflection when he can not merely have a vivid and clear cognition of all qualities, but also recognise one or more of these as differentiating qualities for himself. The first act of this recognition produces a clear concept. It is the first judgement of the soul. By what means did the recognition take place? Through a sign which it had to abstract and which, as a sign of reflection, was clear to it. Here it is. Let us shout eureka. The first sign of reflection was the word of the soul. Hence human language is discovered. (Herder, *Abhandlung über den Ursprung der Sprache* (53))

Locke distinguishes between various levels of language which could be understood as developmental stages, an idea elaborated in Condillac's sensualist philosophy. Condillac presented a theory of how language might have emerged from previous abilities found in animals which make use of natural expressive signs associated with desires and affects. Human speech developed from this 'language of action' when reflexive consciousness made it possible to control imagination and memory and enlarge the system of natural signs to instituted language **(a)**. Condillac thought that the expressive emotional functions of the language continued to form one aspect of instituted language. Rousseau's view was influenced by Condillac, but he put forward the question of how people might have first introduced the instituted language without having a language before **(b)**. In his posthumous special treatise on the origin of language, Rousseau argued that the need for expressing emotions was a central factor in the emergence of language which serves better for this purpose than mere voices and gestures, particularly the tone and melody of language. Language and song, having the same origin, are later separated in northern languages, while southern languages have retained the musical and emotional nature of languages **(c, d)**. Following these suggestions, Herder argued that the human mind invented language when it recognised things and named them. This ability is particularly human; therefore there are no animal languages **(e)**. See also Hudson 2005; Aarsleff 2006.

Part IX
Self-Consciousness

Chapter 26

Ancient Theories

Pauliina Remes

Ancient philosophy provides us with a range of material about the ways in which the human mind reveals its activities to itself and relates to itself. Several ancient philosophers explored these issues in many different contexts. The topic can be divided into two separate but closely related aspects: consciousness in general on the one hand (i.e., the awareness involved in perception and thinking about the external world and in our connected mental activities), and the consciousness of the self, or the subject of cognition, on the other hand.

Some commentators have suggested that in ancient Greek and Latin there is no technical terminology for the phenomenon of consciousness, nor for self. Although there is something to this claim, things are not quite that simple. In Greek, for example, there is the reflexive pronoun *heauton* which also appears in contexts where the cognising subject is self-conscious or recognises its own role in cognition. More often than not, what is translated as ‘consciousness’ is simply the Greek word *aisthēsis* (or the Latin verb *percipere*), commonly rendered as ‘perception’, although late antiquity witnessed particular growth of terminology denoting something very like consciousness and self-consciousness (e.g., *parakolouthēsis*, *sunaisthēsis*, *suneidēsis*).

The lack of a specific Classical terminology equivalent to ‘consciousness’ is symptomatic of the fact that in antiquity, either the theories of perception or the postulation of such soul’s powers as appearance (*phantasia*) and the Aristotelian faculty of common sense (*koinē aisthēsis* or *sensus communis*) were often considered as enough to explain the kinds of phenomena which much later became referred to under the notion of ‘consciousness’. Self-conscious phenomena were often discussed as further aspects of the primary cognitive activities of perception and thinking, although the consciousness of the ‘I’ also merited some special attention.

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The reflexivity inherent in thinking and perceiving functioned as the basis for the views on other reflexive mental states: in the classical view, self-consciousness follows from the consciousness of the objects. Many philosophers believed that the act of thinking and the act of perception naturally include awareness of these same acts, and possibly also of the subject of these acts (that is, an inbuilt self-reference or self-familiarity). Sometimes a stronger self-knowledge was assumed. A sensible human being *knows* that she herself is the subject of mental acts and the agent of her actions, and some thinkers believed that, further, knowledge of existence and essence are either involved or at least possible. The phenomena of somatic self-awareness – that is, an awareness of oneself in a body with structurally differentiated parts that can move their position – and self-awareness of oneself as an animal were explored by the Stoics (1).

The question of if and how the subject is some *one thing*, a unified center of awareness and action, was discussed in the context of perception. Parallel and connected views concern the unity of the intellect and of moral agency (2). Aristotle pointed out that one's self-awareness is temporally unified, that is, it involves locating oneself as the subject of temporally organised experiences which are continuous in time. It is impossible to be unaware of one's existence, even for a moment (3).

How much, how reliably, and by what means the subject or the soul may access itself (both its states and itself as subject) formed another central cluster of dilemmas. Ancient philosophers assumed, in general, that the subject cannot be mistaken about being the subject of her states of soul, but that knowing something (for example, about one's moral qualities) is another and less direct kind of self-knowledge; as such, it is more liable to self-deception, and to acquire it requires more than mere introspection. The Sceptics questioned the transparency of the subject to itself. However, Plotinus and Augustine saw in the relationship between the subject of thought and her thinking an immediacy and directness, a development which resulted in a precursor to Descartes' *cogito* argument (4).

The Cyrenaics and Sceptics claimed that the self-reports of one's own mental and bodily states are incontrovertible. However, the authority of first-person experience was not widely taken to be self-evident. Subjectivity of experience, understood as personal qualitative aspects or phenomenal feel of experience, is not something ancient philosophers seemed overly interested in. This did not prevent them from insisting that there must be some individual qualitative differences in the cognition of the same objects (5). The role of the subject or the self in cognition is particularly evident in discussions about voluntary attention and concentration. Through voluntary attention, subjects select those things which are salient to them in experiences, and thus also engage in the constitution of a unique and personal set of memories and beliefs (6).

1 Reflexive Awareness of Self

a. And the mind itself is thinkable like other thinkable objects. For in things without matter that which thinks and that which is thought are the same. (Aristotle, *De anima* III.4, 430a2–4)

b. Since the intellect in actuality is nothing other than the form thought (just as has also been shown to be the case for perception), the intellect in disposition – that which is capable to think on its own and to grasp the forms of the intelligibles in themselves – is already capable of thinking itself. For since it is itself the form thought, if by thinking it becomes what it thinks, that which has the disposition of thinking the forms thereby has the disposition and capacity to think itself. That which it is capable of thinking becomes itself by thinking. Whenever it thinks, it is primarily and in itself thinking of the intelligible form; but it is thinking itself incidentally, because it incidentally becomes the thing it thinks whenever it thinks. (Alexander of Aphrodisias, *De anima* 86, 14–23)

c. ...whenever we perceive, we are aware that we perceive, and whenever we think we are aware that we think, and to be aware that we perceive or think is to be aware that we exist (for existence, as we saw, is perception or thought)... (Aristotle, *Nicomachean Ethics* IX.9, 1170a29–35)

d. ...when one perceives, one is conscious of oneself as being and perceiving (Alexander of Aphrodisias, *In De sensu* 7, 448a22)

e. If the intellect's thinking is that which is thought, and it is itself the object of thinking, it will thus think of itself; for it will think by thinking that which is itself. And it will think of the object of thinking, which is itself. In each case, therefore, it thinks of itself, both in the manner in which it is thinking and in the manner in which it is the object of thought, which it thinks by thinking and which is itself. (Plotinus, *Enneads* V.3.5, 43–48)

f. For those people who are capable to intellectually delve into their own essence and to grasp their own essence, and are able, in this very grasping and the knowledge of that grasping, to receive themselves through the unity of that which grasps and that which is grasped – for those who are so present to themselves, being is also present. (Porphyry, *Sententiae* 40 (50.16–21))

g. We should realise that when an animal is born it immediately simultaneously perceives itself ... The animals first perceive their own parts ... both that they have [these parts] and the purpose for which they have them; and we ourselves perceive the eyes and the ears and the rest. At any rate whenever we want to see something, we strain our eyes towards the object of vision, not the ears ... Therefore the first proof of every animal's perceiving itself is a collective awareness of all of its own parts and the functions for which the parts were given. The second [proof] is that animals are not unaware of their equipment for self-defense. For when bulls do battle with other bulls or with animals of different species, they stick out their horns, as if these were their inborn weapons for opposition. In this way all other creatures have the same relation to their appropriate, and, so to speak, inborn armour. (Hierocles 1.34–39, 51–57, 2.1–9=LS 57C2–3)

h. It is easier to understand nature than to explain it; hence, that child does not understand what 'constitution' is, but understands his own constitution. He does not

know what an animal is, but he is aware that he is an animal ... Thus even children and animals have an awareness of their primary constituent, but the awareness is not very lucid, nor articulate. (Seneca, *Letter* 121, 11–13)

The views about self-awareness stand on two recurring ideas within ancient philosophy: the ontology of the intellect, that is, the view that the intellect is identical with its objects of thought (e.g. Aristotle, *Metaphysics* XII.7, 1072b19–21), and the reflexivity of perception (e.g. Aristotle, *De anima* III.2, 425b12–23). Aristotle understood the structure of intellection to involve the thinker actually becoming one with the object of thought in the act of thinking (just as the perceiver actualizes the *forms* of the perceptual objects and *not* their representations, see pp. 249–250 above). The intellect is not merely *capable* of thinking of itself (**a**) – Alexander of Aphrodisias claims that the identity of the thinker with the object also implies that it actually thinks of itself, and even that it cannot fail to recognise itself as the thinker (**b**). Cf. Aristotle, *De anima* III.4, 429b26; Philoponus, *In De intellectu* 20, ed. Verbeke, 90–93; 21, 1–10; Augustine, *De trinitate* XIV.6.8. When this notion of self-recognition implicit in thinking activity became connected with the idea that the activities of perception and thought are what it is for a human being to be or exist, reflexive awareness of these activities came to imply an awareness of our existence (**c**, **d**). In this tradition, the self-awareness involved in self-intellection and self-perception is a secondary or incidental accompaniment to the act of perception or thinking, but this function seems to have gained in importance as centuries passed. The Neoplatonists emphasised that this awareness really is knowledge of a self, that it informs us of our essence, and is for that reason desirable (**e**, **f**). For more references and discussion, see Crystal 2002; Sorabji 2005, chapter 4 on self-awareness; 2006, 201–211.

Starting from naturalistic assumptions, the Stoics emphasised a bodily self-awareness (*sunaisthēsis*) that is something basic, and not primarily an intellectual achievement: this consciousness of the structure and posture of the body through immediate self-perception is demonstrated by the behavior of an animal when it exercises its natural urge for self-preservation. Cf. Cicero *De finibus* III.5.16; Epictetus, *Dissertationes* I.2.30–32; Long 1991, 1993. Seneca added that this consciousness is due to a consciousness of the primary element (the soul) in the body, but that this does not mean that explanatory knowledge of this principle would be available in the same immediate way. He also explained how an animal's – and especially a human being's – constitution changes when it matures, but how the awareness and adaptation of that constitution stay the same (121, 14–16) (**g**, **h**). *Sunaisthēsis* was adopted by the Neoplatonist Plotinus who, as with many other Stoic concepts, dematerialised it, giving *sunaisthēsis* the meaning which later came to have such influence: *sunaisthēsis*, according to Plotinus, is that which unifies the self-consciousness of both body and the contents of the intellect. Cf. Plotinus, *Enneads* IV.4.45.2–8; V.3.13.19–23; Remes 2007a, chapter 2.1. (See also **2 d**.)

2 Unified Center or ‘I’

a. It is not possible to distinguish that white is different from sweet by separate capacities, but both of them have to be clear to some one thing. If this were not the case, when I perceive one thing and you another, it would be clear from that that these objects differ from each other. Therefore, it must be some one thing that declares them different; for sweet is different from white. The same thing then declares this; hence, insofar as it declares it, it both thinks and perceives. It is therefore clear that it is not possible to judge separate objects by separate means. (Aristotle, *De anima* III.2, 426b17–23)

b. That which is altogether simple and self-sufficient needs nothing; but that which is self-sufficient in an inferior manner, needing itself, this needs to think itself; and that which is lacking in relation to itself creates self-sufficiency through being a whole, becoming sufficient out of all its parts, being present to itself and inclining to itself. For self-consciousness is perception of something that is many; even the name testifies to this effect. (Plotinus, *Enneads* V.3.13, 16–22)

c. In most of the capacities you will find none which is self-contemplative, and therefore none which is self-approving or -disapproving, ... but music will not tell you whether you should sing or play or do neither. What, then, will tell you? That which contemplates both itself and everything else. And what is this? The reasoning capacity, for this is the only capacity we have received which apprehends itself – what it is and of what it is capable and how valuable it is to us, and likewise [it apprehends] all the other capacities. For what else tells us that gold is beautiful? For gold itself does not tell us. Clearly it is the capacity which makes use of impressions. What else judges music, grammar, and other capacities, approving upon their uses and pointing out the right moment [for their use]? Nothing else does. (Epictetus, *Dissertationes* I.1.1, 3–6)

d. Moreover again, when [the soul] desires some appetites, anger aims at others, and deliberate choice moves [the soul] to others, there is some one life moving the soul to all of these, through which we say, ‘I desire’ and ‘I am angry’ and ‘I deliberately choose’. That power joins all these in assenting and lives together and among them all, being a capacity of impulse directed to all that is desirable. And indeed prior to both of these, there is a unity of the soul, which often says ‘I am perceiving’, ‘I am reasoning’, ‘I have an appetite’ and ‘I will’, following consciously all these activities and cooperating with them. Otherwise, we would not know them all, nor could we say how they differ, unless there were some united, partless thing in us which knew them all, prior the common sense, prior to opinion, prior to appetite and prior to will. And it knows their cognitions, has connected their desires partlessly together, and of each says ‘I’ and ‘I am active’. (Proclus, *Commentary on Plato’s Parmenides*, 957,25–958,10)

Ancient philosophers’ views about the unity of the subject – the ‘I’ – rested on their insight that by some means, the soul is able to unify perceptual information (a). (See also Plato, *Theaetetus* 184d1–5; Plotinus, *Enneads* IV.7.6.3–15.)

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Plato seems to believe, further, that the mind's synthetic activity (that is, its comparative judgements) is, at least in the case of adult human beings, due to its being a particular kind of soul, namely an intelligent or rational soul. (Cf. Carpenter 2007.) A further faculty is sometimes designated to explain the synthetic unity of perception. Alexander of Aphrodisias held this to be common sense (see p. 119 above). For the Stoics and Plotinus, the unity of perception was the probable function of *phantasia* (for Stoics, see Long and Sedley 1987 on impressions (39) and soul (53), with comments; Plotinus, *Enneads* IV.4.8). In general, Plotinus thought that what is not absolute simplicity must have its unity elsewhere and by some means, and therefore the intellect, for instance, unifies itself by being self-aware. While this unity is achieved by the intellect in its act of self-thinking, it involves an awareness the role of which is to gather the parts into something one (c). The terminology for this unifying self-perception, intellectual though it might in some contexts be, was borrowed from the Stoic discussions on bodily self-perception (cf. 1 g). Plotinus postulated, further, a unitary locus of awareness where perception and reasoning meet: *Enneads* IV.3.30, 5–16. (See also his discussion concerning two different powers of *phantasia*; *Enneads* IV.3.31.) Epictetus situated in the realm of action an argument similar to originally Platonic call for some unity in the soul to explain the phenomenon of unifying perceptual awareness: in order to be able to discern between different arts and abilities, and to compare them and to judge which one to engage in, one needs one central faculty that is in control of all of them. This is the rational power (c). Concerns like these led in late antiquity to the postulation of a yet further faculty, the attentive faculty (*prosektikon*), which belongs to the rational soul and delivers knowledge of the 'I' involved in all mental acts. Besides being the locus of the unity of self-awareness, it is the locus of self-familiarity (d). (See also p. 54 above; Sorabji 2005, 4c.) For temporal unity, see the next section.

3 Self-Awareness in Time

a. However, when one has knowledge and sensation without performing these actions, then one recalls, in the case of knowledge, because one has learned it or contemplated it; in the case of sensation, because one has heard or seen it or sensed it in some other way. (Aristotle, *De memoria* 1, 449b18–22)

b. Some who address musical harmonies say that the sounds do not reach us simultaneously, but only appear to do so, and that this escapes our notice whenever the time involved is imperceptible. Is this true or not? Someone might perhaps say on this basis that one seems to see and hear simultaneously because the intervals of

time escape observation. Or is this false, and it cannot be that any time is imperceptible or would go unnoticed; is it possible to perceive all of it? For if, when someone perceives himself or anything else in continuous time, it is impossible for him to be unaware of his existence; but if in continuous time there were a time so short as to be quite imperceptible, then it is clear that he would be unaware that he exists or that he sees or perceives ... Therefore all [magnitudes] can be perceived, even though they do not appear to be perceptible. (Aristotle, *De sensu* 7, 448a1 9–30, b12–13)

c. But if in it [the intellect] one thing does not happen after another, it thinks everything simultaneously; so since it thinks all things simultaneously, and not one thing now and another thing later, it thinks everything simultaneously and eternally. If, then, it is characterised by ‘now’, and the past and the future are annulled from it, it occurs in a non-extended timeless now, so that it is together with itself both with respect to multiplicity and with respect to temporal extension. For this reason, in the case [of the intellect], all things are at one in unity, both in non-extension and in timelessness. (Porphyry, *Sententiae* 44)

Aristotle held that in remembering, not only is the perceptual faculty capable of locating past perceptions to ‘before’, i.e., as past, but that it also informs the subject of having had those experiences as temporally located and continuous. Furthermore, this temporally located awareness also includes a self-reference: it was I who experienced or thought something in that past moment (a). Aristotle subscribed to the idea that an individual is identical with himself (i.e., the same entity) at every point in time. He considered absurd the idea that one would be unaware of one’s own existence for some moments, and uses the continuous awareness of one’s existence to prove a point about perception of instances – namely, that even the smallest of moments are perceived as the part of some whole (b). According to the Neoplatonists, the pure intellect connected with the eternal forms functions apart from time, and was thus contrasted with normal conscious experiences that happen in time and succession (c). See, for example, Plotinus *Enneads* V.1.4.20–26. Since this intellect was also understood to be the true and ideal ‘I’, the highest form of self-awareness was located in the self-knowledge of the atemporal ‘nous’ within (see 4 h).

4 Self-Knowledge and Self-Inquiry

a. One who acts out of ignorance of these matters acts involuntarily. Perhaps it will be good to specify what and how many they are: who acts, what he is doing, what or whom he is acting on, and sometimes also what (e.g., what instrument) he is doing it with, and to what end (e.g., for safety), and how he is doing it (e.g., gently

or violently). Now no one could be ignorant of all these aspects unless he was mad, and evidently also he could not be ignorant of who is acting, for how could he not know himself? (Aristotle, *Nicomachean Ethics* III.1, 1111a2–7)

b. When we are thinking of ourselves, it is clear that we are looking at a thinking nature; otherwise, we would be mistaken about thinking. (Plotinus, *Enneads* III.9.6, 1–2)

c. But without any appearances or phantasms of delusive imagination, I am quite certain that I am, and that I know and love it. In respect of these truths, I fear none of the arguments of the Academicians when they say, What if you are mistaken? For if I am mistaken, yet I am. For he who is not, cannot be mistaken; and if I am mistaken, by the same token I am. Therefore, since I am if I am mistaken, how am I mistaken about being? For it is certain that I am if I am mistaken. Since, therefore, I, the person mistaken, should be, even if I were mistaken, certainly I am not mistaken in this knowledge that I am. And consequently, neither am I mistaken in knowing that I know. For just as I know that I am, so also I know this: that I know. (Augustine, *De civitate Dei* XI.26)

d. Further, in grasping the senses it [the reason] will altogether itself be sense. For to grasp the senses as senses, that is, in exercising perception, it too will become of the same kind with them ... But if the reason that comes to know the senses is found to have transformed into their nature, there will no longer exist anything that would investigate the senses; for that which we supposed to be investigating has turned out to be the same as that which was investigated – and for this reason is needed something to comprehend it ... For if the intellect comprehends itself, it will either comprehend itself as a whole, or not at all as a whole but by using some part of itself for this ... If [it does so] by some part, how will that part in turn know itself? And so *ad infinitum*. (Sextus Empiricus, *Adversus mathematicos* VII, 305–307; 310–311; 312)

e. And honour and good repute are among the most pleasant things, since they make everybody to imagine that they are like an excellent man, particularly when those who are considered truthful say so ... It is pleasant to be loved, for in this case too a man imagines that he is good, something which anyone desires who perceives it. (Aristotle, *Rhetorics* I.12, 1371a16–18)

f. ‘Surely you have noticed that when one looks into an eye, a person appears in it, facing the act of looking, like in a mirror. We call this the pupil, for it is an image of the one who is looking.’

‘You are right.’

‘Then an eye will see itself by observing an eye and looking at the best part of it, the part with which it also can see.’

‘So it seems.’

...

‘Then if the soul, Alcibiades, is to know itself, it must itself look at a soul, and especially at that place in which the virtue of the soul, wisdom, resides, and at other things that happen to be similar with it.’ (Plato (?), *Alcibiades* I, 133a1–7; b7–10)

g. Since, then, it is very difficult to know oneself, as wise men have said, and very pleasant, since knowing oneself is pleasant, we cannot see what we are from ourselves. ... So as when we want to see our own face, we see it by looking in a mirror, similarly when we want to know ourselves, we can do it by looking at a friend, for a friend is, as we say, another self. (Aristotle, *Magna moralia* II.15, 1213a13–16; 20–26)

h. Retreat to yourself and see; ... If you have become this [virtuous true inner self], and see it, and are united with yourself in purity – having nothing obstructing you from becoming one in this way, nor having anything else inside mixed with it, but wholly yourself, only true light, not measured by magnitude, nor confined by shape into less, nor increased in magnitude by unlimitedness, but everywhere unmeasured ([since you are] greater than all measure and superior to all quantity) – if you see that you have become this, then from this time onwards you have become sight. Feel confident about yourself, for having already ascended you no longer need anyone to show you; look intently and see. For this eye alone looks at the great beauty. (Plotinus, *Enneads* I.6.9.7, 15–25)

Aristotle maintained that the agent, if he is not mad, knows securely something about himself, namely that he is the agent (**a**). The irrefutability attached later by Plotinus and Augustine to the reflexive thinking that one is thinking (see **1** above) was the background of Descartes' cogito-argument (**b**, **c**). Cf. *De trinitate* X.8.11; 9.12; XIV.5.7; O'Meara 2000; Sorabji 2006, 212–229; Matthews 1992. Sextus Empiricus had, however, pointed out a structural limitation of self-knowledge, formulating the persistent dilemma that became later known as the 'paradox of subjectivity': how is it possible for the subject to grasp itself *qua* subject rather than *qua* object (**d**)? See Crystal 2002; cf. Plotinus, *Enneads* V.3.5.10–15; Gerson 1997; Remes 2007a, chapter 3.2. Further, in antiquity the mind was not considered as entirely transparent to itself. In addition to the interest in dreams (see pp. 176–179 above), according to Aristotle, people form sensory appearances (*phantasiai*) or images of themselves. These are often connected to a striving for self-restoration or –completion, and thus are not likely to correspond reality but an ideal or pleasurable state of affairs (**e**). Cf. Plato, *Philebus* 40a6–12; Knuutila 2006, 31–32. Important aspects of self-knowledge were held to result from intellectual effort or reflection. Hence the Delphic and Socratic exhortations to know oneself (*Charmides* 164c–165a) and the Socratic method that relied on bringing to surface beliefs and relations between beliefs that are hidden to the subject himself; cf. Vlastos 1983. Plato and Aristotle emphasised the role of others in self-knowledge (**f**, **g**). Cf. Aristotle, *Nicomachean Ethics* IX.9, 1170a29–b14. Plotinus, followed by Augustine (e.g. *Confessions* 10 xvii (26); *De trinitate* X.3.5), adopted the late Stoic method of inward directed contemplation (e.g. Marcus Aurelius, *Ad se ipsum* VII.59) as the means both to secure knowledge and to self-knowledge of one's true self and true nature (**h**). Cf. Sorabji 2006, 230–244.

5 Incorrigeability of and Authority over Experiences

a. Well, Callicles, if human beings didn't have experiences that were common – some sharing one, others sharing another – but one of us experienced something of his own and not shared by others, it wouldn't be easy for him to inform others of what he experienced. (Plato, *Gorgias* 481c5–d1)

b. And similarly some have inferred the truth of appearances from that which appears. For they think that the truth should not be judged by the large or small number and that the same thing that seems sweet by some who taste it, is bitter for others, so that if all were ill or all were insane, and only two or three were healthy or sane, these latter would be thought ill and insane, and not the former. And furthermore, for many of the other animals things appear otherwise than they do to us; and even to an individual, things perceived do not always seem the same. It is therefore not clear which of these sensations are true and which false: for one kind is no more true than the other, but both are alike ... [to these we shall say] 'yes, but not to the same sense and in the same part of it and in the same way and at the same time', so that what appears is true in this way. (Aristotle, *Metaphysics* IV.5, 1009b1–10; 6, 1011a33–1011b1)

c. 'It is clear that if temperance is present to you, you are able to form some opinion about it. For it is necessary, I suppose, that if it is in you, it produces some perception, from which you would have some opinion about it, what it is, and what kind of thing temperance is. Don't you think so?' 'I do!' said Charmides. 'And since you know how to speak Greek, you could doubtless tell that which appears to you'. 'Probably,' he said. 'Well, for us to be able to locate whether it is in you or not,' I said, 'say what temperance is according to your opinion.' (Plato, *Charmides* 158e7–159a8)

d. ...for just as nobody can by argument persuade someone who enjoys that he is not enjoying, or someone who is in pain that he is not in pain, in the same way no-one can persuade someone who is persuaded that he is not persuaded. (Sextus Empiricus, *Adversus mathematicos* VIII, 475)

e. Thus, the criterion of the Sceptic school is, we shall say, the appearance, calling the power of appearance by this name. For since this is fixed by persuasion and involuntary affection, it is not open to question. (Sextus Empiricus, *Outlines of Pyrrhonism* I.9, 22)

f. And some appearances are expert and others nonexpert: a work of art is seen in one way by an expert and in another way by a non-expert. (Diogenes Laertius, *Lives of Philosophers* VII.51)

g. So it will not be the case that, because that which is grasped is one and the same, for this reason those which grasp it should think the objects of their knowledge in nearly the same way; for perception grasps the white, and opinion does, as well as our intellect, but not in the same way ... So then, knowledge varies according to the

nature of the knowing agent. It is not the case that it is according to the grasped object that it is grasped by everything, but it is grasped in a superior way by superior agents, in an inferior way by more inadequate ones. (Proclus, *Commentary on Plato's Parmenides* 956,28–957,1; 12–15)

The common tack in antiquity was to concentrate on the so-called objective or shared aspects of experiences (a). Both Plato and Aristotle tried to meet Protagoras's challenge according to which each person is authoritative about his or her own appearances and opinions (the 'man is the measure' doctrine; Plato, *Theaetetus* 152b–c). Aristotle noted that different species – and even different senses of one individual – do yield different appearances, and that it is not evident which of these are true; however, things do not appear differently (at least for the most part) within the same sense, at the same time and in the same respect (b). In Plato's *Charmides*, Socrates suggests the idea that a human being has a special relation to the states of his or her own soul. If this is so, he says, it should be easy to report on these states. In the end, however, this first-personal authority is challenged since Charmides cannot give a good definition of the virtue supposed to lie in his soul (c); see Woolf 2008. Against a widespread epistemological realism, the Cyrenaics and the Sceptics took seriously the possibility that each person has different affections or appearances (*pathē, phantasiai*) of the things around them, and that it is possible that we only have access to these appearances in our soul – not directly to the things in the world (c, d). See also pp. 58–59 above. The Protagorean emphasis of first-person authority over and incontrovertibility of experience (as not open to question, *azētētos*) was thereby restated, even though the mainstream idea remained that knowledge is of an external or real world, rather than of representations of it in an inner or subjective realm. See Sextus Empiricus, *Adversus mathematicos* VII, 191–192; 197; Burnyeat 1982; Everson 1991a; Fine 2003. While the object of perception and thought had a focal role in theories of perception and thinking, it was not thought to exclusively determine the content. Aristotle pointed out that the state of the organ perceiving affects the resulting perception (*De anima* II.10, 422b1–11). It was, furthermore, important for ancient philosophers to leave room for qualitative differences that result from variation in cognitive powers between different subjects (e.g. Aristotle, *Metaphysics* IV.6 1010b12–15). In principle, this probably held for individual differences; ancient philosophers, however, tended to approach this issue through kinds of subjects, that is, through *type* rather than *token* (the Stoics differentiated between experts and non-experts (e), Proclus between God, intellect and human soul, as well as the soul's different faculties applied to the object (f)). See Remes 2007b.

6 Concentration and Voluntary Attention

a. ... activities are hindered by pleasures arising from other sources. For people who are fond of the flute cannot attend to arguments if they overhear someone playing the flute, since they enjoy flute-playing more than the present activity; the pleasure from the flute-playing destroys the argumentative activity. The same happens in other cases, whenever one tries to do two things at the same time; the more pleasant activity expels the other, and if it is much more pleasant, it does more so and the other activity ceases. This is why when we enjoy something very much we can hardly do anything else, and we do something else when we are not much pleased by another; for example, the people who eat sweets in the theatre do so most when the actors are bad. (Aristotle, *Nicomachean Ethics* X.5, 1175b2–13)

b. When what is perceived makes no difference, or the perception means nothing at all for the perceiver, but is moved involuntarily by the difference in the objects seen, this [perception] only has the experience whereas the soul does not receive it into its interior ... And things which happen entirely incidentally do not necessarily happen in the faculty of appearance, and even if they did happen, not in such a manner that it would guard and observe them, but the impression of a thing like this [i.e., an insignificant thing] would not yield any awareness ... (Plotinus, *Enneads* IV.4.8.8–14, 17–20)

c. But the will turns the memory from the sense when it is intent on something else and does not allow the things which are present to cling to it. This is easily established, for it often appears that we have not heard someone who was speaking to us, because we were thinking of something else. But this is not true; we did hear but do not remember. The words slipped away from the perception of our ears because the command of the will, which usually fixes them in the memory, was diverted elsewhere. In such a case it would therefore be more correct to say: ‘We do not remember’ than ‘We did not hear’. For it happens to me quite often, even in reading, that when I have read through a page or a letter, I do not know what I have read, and have to begin it again. For when the command of the will is fixed on something else, the memory is not applied to the bodily sense so well as the sense itself is applied to the letters. So, too, people who walk while the will is intent on something else, do not know where they have gotten to; for if they had not seen, they would not have walked there, or would have felt their way in walking with greater attention, especially if they were passing through a place which they did not know; yet, because they walked easily, they certainly saw; but because the memory was not applied to the sense in the same way as the sense of the eyes was applied to the places through which they were passing, they could not recall at all even the last thing which they saw. Now, to will to turn away the gaze of the mind from that which is in the memory, is nothing other than not to think upon it. (Augustine, *De trinitate* XI.8.15)

d. One could find many worthy activities among wakeful experiences, both theoretical and practical, when we are either contemplating or acting, of which

we are not conscious. For it is not necessary that the person reading is consciously following that he is reading, particularly when he reads with concentration; nor does the person acting bravely have to be aware that he is being brave and that he is acting in accordance with bravery in so far as he is acting; and there are countless such cases. In fact, consciousness [of doing the activity] is in danger of making the activities of which we are conscious themselves weaker. (Plotinus, *Enneads* I.4.10.22–29)

The subject's role in cognitive activities is particularly apparent in voluntary attention and the ability of concentration. Aristotle pointed out that perceiving something more pleasurable or delightful will take one's attention from the other thing which one attempts to do simultaneously, but he does not yet specify whether this is due to something external or the person's personal preference about what is pleasurable **(a)**. Plotinus claimed that small things that make no difference to the subject are perceived by outer senses but do not reach the faculty of appearance and are therefore not noticed or available in our consciousness **(b)**. Augustine referred to cases where we do perceive, but do not later remember perceiving them. We can, for example, perceive letters – and thus 'read' – without understanding the content properly or being able to later recall what we read. This is a malfunction due to inattention in memory and the will being 'turned' elsewhere, rather than of the perceptual powers themselves **(c)**. Cf. Augustine *De trinitate* XI.10.17. For Augustine and voluntary directing of attention, see Brown 2007a; O'Daly 1987, 107–113, p. 53 above. Finally, Plotinus pointed out that in many cases awareness of the *act* (that one is reading) is not necessary for the awareness of the content (of the book), just as a reflexive or second-order awareness of the action and its virtuousness is not needed in order to act virtuously. This kind of overemphasis on the act and its subject can, in fact, be morally dubious. **(d)**. (By distinguishing different kinds, levels, and phenomena of consciousness, Plotinus made several interesting steps forward within the topic. Cf. Smith 1978; Warren 1964.)

Chapter 27

Medieval Theories

Juhana Toivanen and Mikko Yrjönsuuri

Medieval psychological texts include extensive discussions about the ability to cognise various things which are parts of the cognising subject itself. Awareness of oneself as a subject of thought was not, however, commonly distinguished from other kinds of self-awareness. In this way, the general approach to philosophical questions concerning self-cognition is different from the modern one – as are the contexts in which these questions were asked. Still, medieval philosophy contains interesting material about self-cognition. It should be mentioned that although there is no Latin equivalent to the noun ‘self,’ medievals employed various grammatical structures to discuss these matters. For instance, the pronoun *ipse* and the reflexive pronoun *se* (*se cognoscere* for self-knowledge, *se apprehendere* for self-apprehension, etc.) were much used. Also, the Latin terms *conscientia* and *conscientia sui* were used in ways similar to the contemporary English ‘consciousness’ and ‘self-consciousness,’ though this was not very common.

Medieval discussions continue the ancient Neoplatonic-Stoic tradition, which also incorporated Aristotelian ideas. This tradition was taken over and developed further by Arabic thinkers, whose influence on medieval Latin discussions of self-cognition was significant. The opposition between Ibn Sina (Avicenna) and Ibn Rushd (Averroes) became especially important. Avicenna emphasises the direct presence of everything in the soul to the soul itself. By contrast, Averroes thinks that human cognitive capacities are primarily suitable for cognising material reality, and consequently, that the soul cannot be a direct object of cognition. Another important

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source in medieval Latin discussions on self-cognition was Augustine, whose texts (in particular, *De trinitate*) were widely used. Augustine and Avicenna approached self-cognition through a threefold division that became standard in thirteenth-century discussions. The three objects of knowledge they defined were the essence of the soul, the acts of the soul, and the dispositions (*habitus*) of the soul.

Medieval authors generally assumed – and often explicitly pointed out – that no one can be in doubt about the existence of one’s own soul. Yet it was a matter of disagreement whether, from this indubitable knowledge, anything follows concerning the essence of one’s soul or its separability from the body. In the Latin Middle Ages, the topic is occasionally connected to Avicenna’s well-known ‘floating man’ thought experiment, which supposedly shows that one can directly perceive one’s own existence without any reliable perception of the body, and that therefore one must conceive of oneself as an incorporeal soul (1). Avicenna’s idea can be understood in relation to the Neoplatonic notion of the intellect’s ability to turn toward itself, which also influenced Latin thinkers directly, especially through *Liber de causis* (2).

Thinkers in the Augustinian tradition also thought that the soul’s incorporeality could be directly inferred from the immediate awareness of oneself which is unlike any awareness of corporeal things. In thirteenth-century European universities, this Augustinian-Avicennian conception was defended and developed by Franciscan thinkers, who gave it a more epistemological twist (3). It was also challenged by an appeal to the Aristotelian conception of self-cognition, which was understood in light of Averroes’s interpretation. According to the medieval understanding of the Aristotelian view, the essence of the soul cannot be immediately experienced, and even knowledge of the existence of one’s own soul results from perceiving acts of the soul rather than its essence. Thus, Thomas Aquinas argued that knowledge of the incorporeality of the soul does not result from immediate perception, but from scientific study (4).

It was generally agreed that we perceive the acts of our own soul. When seeing a stone, say, we normally perceive *seeing* and not only the stone. There were, however, disagreements about how this second-order perception ought to be understood, and whether it is separable from the first-order seeing (5). Towards the fourteenth century, it became increasingly acknowledged (on the basis of some Augustinian examples) that there are non-conscious cognitive acts, which are not accompanied by and do not include any second-order perception (6).

The knowledge of the dispositions of one’s own soul was often discussed with an eye to a particular problem of knowing one’s own faith. Augustine argued in his *De trinitate* that one has indubitable consciousness of one’s own faith. Medieval Aristotelian thinkers, such as Thomas Aquinas, argued that knowledge of the dispositions of the soul comes through perceiving the acts of the soul, since dispositions are not directly perceivable (7).

In addition to these explicitly recognised topics of discussion, two further issues were often addressed in a less systematic way, and usually in connection with each other: first, the experiential unity of the soul (or the lack thereof), and second, the experience of the things in the soul as one’s own. The latter was dealt with especially in relation to the so-called Averroist one-mind doctrine, according to which

all humans share the same intellectual soul and are individuals only in relation to the body (and thereby the animal soul, too).

According to Aquinas, Plato thought that human beings have several souls. This is a position Avicenna had argued against through reference to an experiential unity in action-related cognitive operations, apparently referring even to the souls of the lower animals. On this issue, the positions taken do not follow the typically important distinction between the Aristotelian and Augustinian-Avicennian approaches. The mainstream solution to this problem was to accept some kind of experiential unity, although it was not taken as self-evident. One of the problems was locating the faculty that experiences this unity somewhere in the psychological system (8).

From the viewpoint of the Averroist one-mind doctrine, it becomes problematic to claim that one experiences intellectual acts as individually one's own. Thus, Aquinas argues against the so-called Latin Averroists that, since everyone experiences that one has individually one's own intellectual acts, one has one's own intellectual soul. Defenders of a radically Averroist approach in this issue were few in the Latin Middle Ages. Nevertheless, it was not generally accepted that experience alone reveals the subject of intellectual acts. For example, William of Ockham thought that in experiencing an intellectual act one does not experience oneself as the subject of the act (9).

A further topic which emerged from time to time in various contexts was the awareness one has of one's own body as a part of oneself. Medieval philosophers generally adhered to the idea that the body is a genuine part of one's self, especially as the Christian doctrine of the resurrection of the body emphasises the embodied nature of human existence. A distinctive feature of some of the thirteenth-century discussions was that the scope of the sense of touch was extended so as to include perception of one's own body under it (10).

1 'Floating Man' Thought Experiment

a. We say: one of us must imagine himself as though created all at once and perfect but with his sight veiled from observing external things, and as though created falling in the air or in the void so that he would not encounter air resistance, which he would have to sense, and with his limbs separated from each other so that they neither meet nor touch. He must then reflect upon whether he would affirm the existence of his essence.

He would not hesitate to affirm his essence existing, but he would not thereby affirm any of his limbs, any of his internal organs, whether heart or brain, or any of the external things. Rather, he would be affirming his essence without affirming for it length, breadth or depth. And if in this state he were able to imagine a hand or some other limb, he would not imagine it as part of his essence or a condition for its existence.

Now, you know that what is affirmed is other than what is not affirmed and what is close is other than what is not close to him. Hence the essence whose existence he

has affirmed is special to him in that it is he himself, other than his body and limbs that were affirmed. Thus, he who is attentive has the means to be awakened to the existence of soul as something other than the body – indeed, not a body at all – and to be acquainted with and aware of it. (Avicenna, *De anima*, Arabic text, ed. Rahman, I.1, 16, trans. Jari Kaukua; Latin text, ed. van Riet, 36–37)

Avicenna's so-called 'floating man' thought experiment has often been compared to Descartes's *cogito ergo sum*. Avicenna's intention, however, is not to prove the existence of the immaterial soul. Instead, the idea is to show how one can bring oneself to see the independence of the soul from the body. See also *De anima* V.7, 162–163 (Latin); Avicenna, *Ishārāt*, 119; Pseudo-Aristotle, *Theologia* VIII, 144–163. Avicenna's thought experiment was not often cited in Latin discussions. See, however, William of Auvergne, *De anima* II.13; John of la Rochelle, *Summa de anima* I.5 (51); Matthew of Aquasparta, *Quaestiones disputatae de cognitione* 5 (295, 312); Vital du Four, *Octo quaestiones disputatae* 4.1 (242). See Hasse 2000, 80–92; Kaukua and Kukkonen 2007; Kaukua 2007; Sorabji 2006.

2 Neoplatonic Return of the Mind onto Itself Understood as Self-Knowledge

a. I may withdraw with my soul, put my body aside and become as if I were a naked substance without a body, so that I enter myself, return to it apart from other things. And so I am knowledge, what knows and what is known all together, and I see in myself such beauty, splendour and brightness that I remain marvelling and perplexed at it, so that I know that I am one of the parts of the sublime, surpassing, divine world, possessing active life.

When I am certain of that, I ascend by myself from that world to the divine world and become as if placed in and connected to it, so that I am above the entire intellectual world, and I see as if I were standing in that sublime and divine position. And there I see such light and splendour that tongues cannot describe nor ears exhaust it. When that light and splendour overwhelms me and I do not have the strength to endure it, I descend from the intellect to thought and reflection. When I have come the world of thought and reflection, thought veils that light and splendour from me, and I remain wondering how I have fallen from that lofty and divine place and come to the place of thought, my soul having once been able to leave its body behind, to return to itself and to ascend to the intellectual world and then to the divine world, until it came to the place of the splendour and light, which is the cause of all light and splendour. What a wonder how I have seen my soul filled with light, although it was still in the state of being in the body, not leaving it. (Anonymous, *Uthūlūjīyā Aristātālīs*, ed. Badawī I, 22; trans. Jari Kaukua; Pseudo-Aristotle, *Theologia* I, 21–27 (225))

b. Every knower that knows itself returns completely to itself. That is, knowledge is nothing but [intellectual] action. Thus, when the knower knows itself, it returns through its knowledge to itself. Since this is so, the knower and the known are one thing, since the knower's knowledge of itself is from it and to it: it is from it because it is the knower, and to it because it is the known. (Anonymous, *Kitāb al-īdāh fī al-khayr al-mahd li Aristūtālīs* 14, 16 ed. Badawī; trans. Jari Kaukua; *Liber de causis* XIV (XV))

In the Neoplatonic tradition, meditative retracement of the soul onto itself was a way of elevating oneself from the corporeal world to higher realms. In the mystical tradition, consciousness of God was often sought in consciousness of the higher parts of one's soul. Some Arabic thinkers discussed in this context the so-called *Theology of Aristotle* which derived from Plotinus' *Enneads* IV-VI (**a**). See Adamson 2002. Another Neoplatonic conception pertaining to self-cognition is discussed in *Liber de causis*, a twelfth-century Latin translation of an anonymous Arabic treatise which was based on Proclus's *Elements of Theology*. Self-cognition pertains to the essence of the subject, the knower and the known are one and the same thing, and self-cognition is achieved by a reflexive turning toward one's own essence (**b**). See also Augustine, *De trinitate* VIII.6; IX.3–5, 11–12; X; XII.12; XIV.5–6; XV.12; Avicenna, *Ta'īqāt* 160–161; Anselm of Canterbury, *Monologion* 33. For discussion, see Cary 2000.

3 Franciscan Thinkers on the Soul's Direct Apprehension of Its Essence

a. Some things are so certain to us that with regard to them there is no probability of error. Augustine says, in *De civitate Dei* XI.24 [nowadays 26]: 'We are, and know that we are, and we love our existence and our knowledge of it, and in these three we are not troubled by any error resembling the truth. For we do not perceive these things by any of the external senses, as we perceive external objects ... but without any phantasms of delusive imagination, I am quite certain that I am and that I know and love it. In respect of these truths, I fear none of the arguments of the Academicians when they say, What if you are mistaken? For if I am mistaken, yet I am.' (Matthew of Aquasparta, *Quaestiones disputatae de fide* 1 (45–46))

b. I say that we can speak in two ways about cognition of the mind itself and the dispositions it has: in one way as for the origin or beginning of the cognition or the knowledge, and in another way as for the completion of the knowledge. Concerning the origin or beginning of the knowledge or the cognition, I say without doubt that the soul cannot look at itself or at the dispositions that exist in it, nor can the first

cognitive act be about itself or about things that are in itself. [...] But when [the mind] has been actualised by a species that is abstracted from phantasms [...] it is called to itself by a kind of spiritual turning that is almost fully disengaged from the exterior things, and it can discern and look at itself and at the things that are inside itself by a direct gaze. In this way it cognises itself and dispositions within itself, not only by reasoning but by intuition and inspection – in such a way that it can direct intellectual contemplation to itself and things in itself, as to an object. (Matthew of Aquasparta, *Quaestiones disputatae de cognitione* 5 (304))

c. The infallible certainty of one's own existence indicates this [namely, that cognition does not require phantasms], for a human being infallibly knows that he exists and lives in such a way that he cannot doubt it. But if a human being did not know that he exists and lives otherwise than through phantasms, a doubt concerning these could arise – and with good reason, since phantasms could not represent these things directly and uniformly, but only indirectly and dissimilarly; and they could not do this *per se* and primarily, but only by a manifold of comparison and reasoning. This is why the proponents of this position say that we arrive at the cognition of our own minds and our intellectual faculties by [cognising] their acts, and at cognition of the acts by cognising objects. For we conjecture by reasoning that the acts by which we cognise objects are derived from some faculty and substance, and they are in some subject. So, in this way we discover that we have some faculty from which the acts are derived. However, if someone were to examine this manner [of cognising one's own mind] very closely, he would find out not only that some uncertainty may occur in it, but also that by this way we could never be sure that we exist, live, and understand. For although we would be certain that these acts are derived from some faculty and are in some subject, how could we know from this that we are the subject and that the faculty is ours? (Peter John Olivi, *Impugnatio quorundam articulorum Arnaldi Galliardi* 19 (459))

Medieval thinkers often defended the certainty of one's own existence by referring to Augustine. For instance, Matthew of Aquasparta quotes Augustine's *De civitate Dei* verbatim when he argues that the knowledge of our own existence is not susceptible to skeptical arguments, for the fact that we err suffices to prove that we exist (**a**). Another commonly quoted passage is *De trinitate* X.10.16. Franciscan authors put Augustine's Neoplatonic view against the Aristotelian conception of self-cognition (see **(4)** below), and argue that the soul is capable of cognising itself directly in such a way that it need not apprehend external things in order to be able to cognise itself. Various views sharing this general starting point were presented. For example, Aquasparta argues that although the soul is incapable of apprehending itself as its first cognitive act (cf. Avicenna's 'floating man', **(1a)** above) it can become capable of apprehending itself directly by intuition and inspection (**b**).

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Peter Olivi criticises Aristotelian position by pointing out that if the mind could cognise itself only by reasoning the existence of the mind from the existence of mental acts, we could never be sure that the acts we experience belong to us. By contrast, the experience of mental acts as one's own proves that the mind must cognise itself directly (c). In another place he argues that there are two distinct ways in which the soul knows itself: by a direct apprehension of itself, and by a rational investigation. He identifies the latter with the Aristotelian view and argues that it is possible if the soul already cognises itself directly. Instead of using a visual metaphor, Olivi describes the direct experiential self-cognition as 'quasi-tactual' (*Quaestiones in secundum librum Sententiarum* 76 (III, 146–148); Toivanen 2013). See also Roger Marston, *Quaestiones disputatae De anima*, q. 1. According to Marston, the intellect forms a species of itself and of its habits after having multiple experiences of its own acts. Afterwards it can be conscious of itself by mediation of this species. See Putallaz 1991b.

4 Aristotelian Views on Indirect Apprehension of the Intellectual Soul

a. Everything is cognisable insofar as it is actual ... This is clear in the case of sensible things because sight does not perceive things which are potentially coloured but only things that are actually coloured. Similarly, it is clear that, insofar as the intellect cognises material things, it cognises only those which are actual ... Human intellect is only a potential being in the genus of intelligible beings, as prime matter is in the genus of sensible things; this is why it is called 'possible [intellect]'. Thus, considered in its essence, the intellect is a potentiality of understanding. This is why it has in itself a power to understand but not to be understood, except insofar as it is actualised ... However, because in this life our intellect naturally looks upon material and sensible things, as has been said above, it understands itself insofar as it is actualised by species that are abstracted from sensible things by the light of the agent intellect, which is the actuality of intelligibles and, by means of intelligibles, of the possible intellect. Therefore, our intellect knows itself by its actuality and not by its essence. This happens in two ways: in the first place, particularly, as when Socrates or Plato perceives that he has an intellectual soul by perceiving that he understands; in the second place, universally, as when we consider the nature of the human mind from the actuality of the intellect ... There is a difference between these two kinds of cognition. Namely, the presence of the mind, which is the principle of the act from which the mind perceives itself, is sufficient for having the first kind of cognition. This is why it is said that the mind cognises itself by its presence.

However, the presence of the mind is not sufficient for having the second kind of cognition of the mind, which requires a careful and subtle investigation. (Thomas Aquinas, *Summa theologiae* I.87.1)

b. Everybody agrees that the human intellect can understand itself, as has been shown immediately above. But it is uncertain how the intellect does this. Therefore I will posit some conclusions about this matter. First, the intellect does not understand itself by its essence ... because in that case it would always chiefly understand itself, without any discursive reasoning, and it would not understand anything before it understands itself, like the divine intellect. And we experience that this is false ... The second conclusion is that the human intellect does not understand itself before it understands something else. Rather, it has to understand something else first before it understands itself, because it is not capable of understanding itself or anything else without the co-operation of the senses ... For we experience that in order to understand, we need an act of sensation (either from the external or from the internal senses), and for this reason we do not understand anything when we sleep deeply without dreaming ... The third conclusion is that even ordinary people and old women understand the intellect easily, since they very easily form the general concepts by which we have the names 'being', 'thing', 'one', 'substance', etc. Yet all beings, and by consequence also the human intellect, are understood indifferently by these concepts and by any of these. In another way, an old woman understands her intellect because she experiences and judges that she knows and believes that no dog is a horse ... Since she cannot know these universals otherwise than by her intellect, she cognises that she is not only a body, as she knows and believes in this way, but a composite of the body and the intellect. Thus, by cognising herself as knowing this and as a composite of the body and the intellect, she cognises both the body and the intellect, although in a confused and indistinct way ... I pose, therefore, the fifth conclusion: Without discursive reasoning you cannot understand the human intellect by a concept that is proper to it, that is, by a concept that does not supposit for anything else than the intellect, but by discursive reasoning you can do this ... It is clear that the intellect cannot be conceived of by a concept that is proper to it without discursive reasoning, because it has been said in the second conclusion that the intellect cannot understand itself first but it has to understand sensible things first. As the intellect knows these sensible things because [it has] their proper representations, it is clear that the intellect understands itself only by discursive reasoning, as when we experience in ourselves such operations which we judge to exist only from this kind of power. (John Buridan, *Quaestiones in De anima* III.9 (92–96))

Accounting for intellectual self-understanding is a complex issue within the context of the Aristotelian theory of the possible and the active intellect. Clearly, it does not come about through the general model of abstraction of the intelligible form from matter. Following Averroes's interpretation,

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Aquinas argues that the human intellectual soul is capable of understanding all sensible things, and as such, it must have a potentiality to become like every other thing. Thus, it is not actual before it actually understands something external to itself, and in this way it is comparable to prime matter. As it is not possible to cognise something that is purely potential, direct self-cognition is impossible. The soul knows itself only by its acts, and thus it arrives at cognition of itself only indirectly (**a**). John Buridan takes the same approach, but points out that as a result of discursive reasoning we can form a proper notion of the soul by which the soul can be known (**b**). See also Averroes, *Commentarium magnum in Aristotelis De anima* III.4 (426–436); Thomas Aquinas, *Quaestiones disputatae de veritate* 1.9 and 10.8; William of Auvergne, *De anima* III.12; Thomas Sutton, *Quodlibet* I.14 and II.14; Thomas Sutton, *Quaestiones ordinariae*, q. 22; Godfrey of Fontaines, *Quodlibet* VII.9; Vital de Four, *Octo quaestiones disputatae de cognitione* 4 (232–252); Francisco Suárez, *Commentaria una cum quaestionibus in libros Aristotelis De anima* 14.5. Sutton analyses not only the reasons why the intellect cannot directly know itself (it is purely passive in itself), but also why it cannot know the essence of the soul (the nature of the intellect is to turn towards phantasms: in itself the soul is knowable but the intellect as a knowing subject cannot achieve direct knowledge of it). By contrast, Godfrey of Fontaines thinks that the intellect is also knowable in itself, but in this life the lack of a phantasm representing it prevents its direct self-knowledge. See Pasnau 2002a; Putallaz 1991a.

5 Apprehending the Acts of the Soul

a. If this perception that we see took place through some other sense than vision, it would happen that that sense would comprehend doubly. For it would comprehend that vision comprehends, and it would comprehend the colour which vision comprehends. For it is impossible that it would comprehend vision to comprehend a colour without itself also comprehending the colour ... And if we also posited the existence of these two powers, namely that the sense which comprehends that we see is different from that which sees, what happened with the first sense also happens with this sense. For it is necessary that it also has a double comprehension, namely the comprehension of its first subject which perceives and the comprehension that it comprehends. And also, if we posit two powers, the same happens with the third one that happened with the second, and so on to infinity, which is impossible. Therefore it is necessary for us to posit that the same power comprehends both, namely its first subject, which also comprehends that it comprehends. And because it is necessary to stop the infinite regress, it is better to do this at the first level, and to posit that we

comprehend colour and that we comprehend also that we comprehend it. (Averroes, *Commentarium magnum in Aristotelis De anima* III.2 (337–338))

b. There are two ways in which the soul experiences a thing, since a thing may be experienced as an object, and a thing may be experienced as a living subject experiences its own act. For otherwise an infinity would arise, since if one's own acts are only experienced as objects, it follows that there is another act whose object it is, and it is experienced. Thus, [it is experienced] as an act and not as an object, and the claim has been [proved], or [it is experienced] as an object of another act, and thus into infinity. (Walter Chatton, *Reportatio et Lectura super Sententias*, prologus 2.5 (121))

c. But if it is held that the reflex act is to be distinguished from the direct act, then I say that the seeing of the stone is seen by another vision. [The regress] nevertheless eventually stops at some seeing that is not naturally seen by a distinct seeing, although it could be seen if it there was no impediment. And I concede an infinite regress with a divine potency. But naturally speaking there will be some seeing that cannot be seen. This is so because our intellect is a limited power which is thus capable of only a certain number of seeings and no more. I do not know, however, at which seeing the regress stops. Perhaps it stops at the second seeing, because perhaps it cannot be seen naturally. (William of Ockham, *Quodlibeta septem* I.14 (OTh 9, 79–80))

d. In reflexive acts there can be an infinite regress. This is evident because the intellect can first understand a stone to exist, then it can understand that it understands the stone to exist, then it can understand that it understands the understanding by which it understands the stone to exist, and so forth. It is evident also because these spoken propositions differ from each other: *a stone exists, I understand the stone to exist, I understand that I understand the stone to exist, I understand myself understanding to understand the stone to exist*, etc. They differ because they correspond to mental propositions which are distinct in the mind. And just as in such spoken propositions there can be an infinite regress, so also in mental ones. (Anonymous, *Quaestiones in De anima*, ed. Patar, III.11 (463))

Averroes argues that awareness of seeing must be based on the visual sense itself. If some other perceptual power perceived the seeing, it would have to have visual powers as well. Furthermore, if there is a second power involved, its awareness would have to be perceived by a third power, and so on to infinity. Averroes has in mind a higher order sensation model of consciousness. He concludes that adding powers will not help with the infinite regress and thus visual awareness must be involved already in the visual experience itself, leaving the infinite regress essentially unsolved (**a**). Walter Chatton argues that an act of the soul does not have to be apprehended by a second-order act in order for the subject to experience the act. His argument is based on the idea

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that if an act of the soul should be apprehended by a second-order act, an infinite regress would follow. This is avoided by the distinction between perceiving an object and experiencing a mental act (**b**). Ockham rejects this view, allowing that a first-order act of the soul is experienced only if it is cognised by a second-order act, but claiming that the regress does not have to continue *ad infinitum*. Rather, at some level (fairly low in the chain) the higher-order act does not need to be experienced. Ockham appears to think that we are incapable of experiencing the experience that we see. Rather, we just experience that we see (**c**). The anonymous author (John Buridan?) follows Ockham in requiring that mental acts need to be objects of second-order mental acts in order to be experienced, but he simply states that the regress can be infinite (**d**). See also Augustine, *De trinitate* XV.12.21–22; Avicenna, *Ishārāt* (120); Thomas Aquinas, *Quaestiones disputatae de veritate* 10.10; Thomas Aquinas, *Summa theologiae* I.78.4 and 87.3; Thomas Aquinas, *Scriptum super libros Sententiarum* I.1.2.1, ad 2; I.10.1.5, ad 2; Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 79 (III, 158–169); Peter John, *Impugnatio quorundam articulorum Arnaldi Galliardii* 19; Vital de Four, *Octo quaestiones disputatae de cognitione* 4 (232–252); John Duns Scotus, *Ordinatio* IV.45.3, nn. 4, 6, 7, 20; William of Ockham, *Quodlibeta septem* II.12 (OTh 9, 165–167); William of Ockham, *Scriptum in librum primum Sententiarum. Ordinatio*, prologus 1.6 (OTh 1, 65–69); Francisco Suárez, *Commentaria una cum quaestionibus in libros Aristotelis De anima* 6.4. See Martin 2007; Yrjönsuuri 2007.

6 Non-conscious Cognitive Acts

a. Augustine's *De trinitate* has an example of such response at the end of XI, 8, where he says that he has often read and not known what he read or heard because of some distraction from the acts of another potency, although there was no incompatibility with those acts. Thus also a person intent on seeing does not perceive hearing anything even when he does hear, although there is no incompatibility between acts of seeing and hearing. (William of Ockham, *Quodlibeta septem* I.14 (OTh 9, 81))

b. I say that when the following is posited in the mind – ‘I think’ – it is possible that it does not appear to the mind that the case is as the proposition signifies, although the case then is as it signifies. [...] Nevertheless, even if this is posited, the mind cannot help but apprehend its own thinking. Even this, however, will not make the mind certain that it thinks, nor does it make the mind see that it thinks, if the intentional act corresponding to the words ‘I think’ is not intuitive. In that case it would be impossible that it would not appear to the mind that it thinks. (Adam Wodeham, *Lectura Secunda in librum primum Sententiarum*, prologus 6.14 (166–167))

c. I add that this act, which is called ‘remembering’, is not immediately about some past thing, but only about some act which was in the remembering subject itself as a human act ... For I only remember the fact that you were sitting because I remember that I saw or knew that you were sitting. Thus, even though I know, for instance, that I was born, and that the world was created, still I do not remember either of these, since I am not aware of any act of my own in the past which was about this or that. (John Duns Scotus, *Ordinatio* IV.45.3 [4])

Augustine’s *De trinitate* XI.8.15 contains influential observations concerning the fact that people do not always consciously apprehend everything in their surroundings. William of Ockham accounts for Augustine’s observation by appealing to the need for a second-order act which makes the object of first-order act appear to the subject. Even though an act of seeing and an act of hearing may take place simultaneously, the subject is conscious only of the act about which she has a second-order cognition (a). This differs from the Aristotelian principle that all mental acts are also perceived. Adam Wodeham’s thought experiment assumes that an abstract proposition, ‘I think,’ is the only thought in the mind. It can appear to be false (when it does not express any direct perceptual awareness of a thought). It cannot, however, appear not to be a thought. Thus, it verifies itself and cannot really be false (b). Wodeham’s discussion grows into a detailed account of how thoughts are present in the mind. See also Adam Wodeham, *Lectura Secunda in librum primum Sententiarum*, *Prol.* q. 2 § 9–16 (50–64). Scotus assumes that in order to be able to recall an earlier mental act, one has to be immediately aware of it when it occurs, and this takes place by an intuitive second-order act (c). See Knuuttila 2006, 261–262; Wolter and McCord Adams 1993. For related discussions, see also Augustine, *De trinitate* XI.8.15 and William of Ockham, *Reportatio* IV.14 (OTh 7, 278–317). Scotus’s idea is criticised by Walter Chatton who thinks that all mental acts are consciously experienced when they take place, without a second-order act (see (5b) above, and *Reportatio et Lectura super Sententias: Collatio ad Librum Primum et Prologus, prol.* 2.5.80–104 (121)). The anonymous author of *Quaestiones in De anima* (John Buridan?) criticises both Chatton and Scotus. According to him, it is possible to remember an earlier thought even if there was no actual awareness of that thought when it occurred (ed. Patat, III.11 (465)).

7 Perceiving the Dispositions of the Soul

a. And we know differently faith itself, which anyone sees to be in his heart if he believes and not to be if he does not believe. [...] He [who believes] has most certain knowledge of it, and conscience proclaims it. We are told to believe, because we

cannot see that which we are told to believe, but we do see the faith in us when it is in us. For things absent we have faith present, and for things outside we have faith inside, and for things not seen we see faith. (Augustine, *De trinitate* XIII.1.3)

b. A disposition is a kind of a middle between a pure potency and a pure act. It has already been said that everything is cognised insofar as it is actual. Therefore insofar as a disposition falls short of being a pure act, it falls short of being cognisable by itself, and it is necessary that it is cognised only from its act, either when someone perceives that he has a disposition by perceiving that he produces an act that is proper to the disposition, or when someone inquires into the nature and essence of the disposition by considering the act. The first kind of cognition of the disposition arises from the presence of the disposition, because the very fact of its presence causes the act whereby it is perceived. The second kind of cognition of the disposition takes place by a studious inquiry, as above has been said about the mind. (Thomas Aquinas, *Summa theologiae* I.87.2)

Augustine thinks that the soul is capable of apprehending its dispositions (such as faith) directly, because nothing is more present to the soul than the soul itself (**a**). Drawing from Aristotelian conception of self-cognition, Aquinas argues that the soul is incapable of apprehending its own dispositions. The existence of dispositions can be reasoned out by apprehending the acts that are related to those dispositions (**b**). See also Thomas Aquinas, *Quaestiones disputatae de veritate* 10.9; Vital de Four, *Octo quaestiones disputatae de cognitione* 4 (232–252).

8 Experiencing the Unity of the Soul

a. Moreover, we say ‘since we perceived such and such, we became angry,’ and this is a true statement. So that which perceives and that which becomes angry is one and the same. [...] So perhaps the truth is that what we mean when we say ‘we perceived and became angry’ is that something in us perceived and something became angry. But the point of someone saying ‘we perceived and became angry’ is not that this is in two parts of us, but rather that something to which perception transmitted this intention (*al-ma'nā*) happened to become angry. Now either this statement is deceptive in this sense, or the truth is that what perceives and what becomes angry is one and the same thing. But this statement is clearly true. Then, that to which perception transmits what it perceives is that which becomes angry. Its being in this state, even if it were a body, does not belong to it insofar as it is body. Thus, it belongs to it insofar as it possesses a faculty by which it is capable of combining these two things. This faculty is not natural, so it must be a soul. (Avicenna, *Kitāb al-najāt* II.6, 228–229, ed. Fakhry; trans. Jari Kaukua)

b. I apprehend by my reason myself seeing and sensing just as I apprehend myself understanding and willing – in such a way that I apprehend and sense by my reason that it is the same who sees and understands, namely me. This sensation would be false unless these acts truly were from the same subject which is called ‘I’. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 59 (II, 540))

Avicenna explains the experience of the unity between various acts of the soul by appealing to the soul itself: all the acts of the soul are apprehended as belonging to the same subject because they are acts of one and the same soul (**a**). Another solution was to attribute the unifying function to one of the faculties of the soul in such a way that one faculty apprehends the acts of other faculties and provides experiential unity. Thus, e.g., Peter John Olivi attributes the unifying function to the highest faculty of the soul, which apprehends all the acts of the lower faculties as belonging to the same subject as the highest faculty itself belongs (**b**). See also Avicenna, *De anima* V.7 (158–159); Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 37 (I, 659); 51 (II, 122); 54 (II, 241); 58 (II, 464); 74 (III, 126).

9 Experiencing Cognitive Acts as One’s Own

a. You will say, ‘I experience and perceive myself to understand.’ I say that this is false. Rather, the intellect, which is united to you naturally as the mover and regulator of your body, has this experience, just like the separate intellect experiences the objects of understanding to be in it. If you say, ‘I experience myself to understand as an aggregate of the body and the intellect,’ this is also false. Rather, the intellect which needs your body as an object has this experience, and it communicates the experience to the aggregate in the aforesaid way. (Anonymous, *Quaestiones in De anima*, ed. Giele, II.4)

b. But if someone wants to say that the intellectual soul is not a form of the body, he must figure out a way in which this action of understanding is the action of this particular human being, because everyone experiences that it is himself who understands. (Thomas Aquinas, *Summa theologiae* I.76.1)

c. I say that it is possible to evidently prove that there is not numerically one intellect in everyone, because it is not possible that the same simultaneously knows and is ignorant of the same thing, loves and hates the same thing, enjoys and suffers the same thing, assents to and dissents from the same thing, and so on. But the intellect in one person knows something and the intellect in another person is ignorant of the thing by its dispositional ignorance; the will in one person loves a thing and the will in another hates it; and so on. All these cases are clear through experience. Thus, it is impossible that there is one intellect in two such people. (William of Ockham, *Quodlibeta septem* I.11 (OTH 9, 67))

d. I say that if one understands by ‘intellectual soul’ an immaterial and incorruptible form which is whole in the whole body and whole in each part, it is not possible to know evidently, neither by reason nor by experience, that such a form exists in us, or that intellection proper to such a substance exists in us, or that such a soul is the form of the body ... Following natural reason it was granted that we experience in us intellection, which is an act of a corruptible form of the body ... But we do not experience that intellection which is the proper operation of an immaterial substance ... And perhaps if we did experience such intellection to exist in us, we could not conclude more than that its subject is in us as a mover, but not as a form. (William of Ockham, *Quodlibeta septem* I.10 (OTh 9, 63–65))

e. We experience that we are those who understand. Thus, my understanding is a vital operation of mine just like seeing and so forth. Therefore the principle of this understanding is a true form and a soul of mine. The antecedent is clear from experience. The consequent is evident because ... if the principle of understanding is not my form but some spiritual substance which is accidentally united to me, the one who understands is the spiritual substance and not me at all because to understand is to produce an [act of] understanding and receive it vitally ... This is confirmed, for we experience that an act of understanding is ours just as an act of seeing. Therefore, it proceeds from an intrinsic principle. But seeing proceeds from a true informing form. The intellect cannot even comprehend how could seeing be a true vital act of mine and how could I see by it unless I myself produce it by an intrinsic form. Therefore the same goes for understanding. (Francisco Suárez, *Commentaria una cum quaestionibus in libros Aristotelis De anima* 2.4)

The discussion concerning the experience of the acts of the soul as one’s own was related to the so-called one-mind doctrine, connected to Averroes. The anonymous Latin Averroist (an arts master, c. 1270) argued that the experience of being individually the subject of one’s intellectual acts is false, because thoughts belong to an intellect that is separate from individual human beings (**a**). By contrast, Thomas Aquinas believed that thoughts are subjectively and correctly experienced as individually one’s own (**b**), which seems to be the majority view represented also by Francisco Suárez (**e**). See Black 1993b. Some thinkers – Ockham for instance – rejected the argument from experiencing cognitive acts as one’s own. He admits that we can infer from the fact that people disagree intellectually that individual human beings have their own intellects. Note, however, that the experience Ockham refers to is from the third person perspective (**c**). According to him, the one-mind doctrine cannot be disproved by appealing to our experience of intellectual acts. This is because we do not experience in ourselves the acts which are proper to an immaterial substance; even if we did, there would not necessarily be anything subjective in them (**d**). See also Averroes, *Commentarium magnum in Aristotelis De anima* III.5; Thomas Aquinas, *De unitate intellectus*, 3;

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William of Baglione, *Utrum in omnibus hominibus sit intellectus unus numero*, 43; Anonymous (John Buridan?), *Quaestiones De anima*, ed. Patar, III.7 (441–442). Siger of Brabant, who defended Averroist metaphysics of the soul, held a more moderate view than the anonymous master. According to Siger, we perceive as our own those operations of the separate intellect which take place in us. See *Quaestiones in tertium De anima* 4 (14). The experience of cognitive acts as one's own was sometimes used as a proof that the soul must be capable of directly cognising itself (see **3c** above).

10 Awareness of One's Own Body

a. I notice in my body the movements by which things related to its growth come about. But these movements never help me to make those distinctions [involved in thinking], nor are able to do any such thing ... Furthermore, I perceive that my body possesses senses, whose movements are spontaneously coordinated to the control of the body. I see with the eyes, hear with the ears, smell with the nostrils, taste with the palate and touch with the hands. But tell me, which of these would you say is able to do that [thinking and distinguishing]? (Aelred of Rievaulx, *Dialogus de anima* I, 25 (692))

b. You may ask why the soul desires more one than another, since there is no preference of one over another due to their uniformity. The answer is that it desires [its own body] because of the union and connection which it had to it. This becomes clear from the following. The rational soul differs from angels and is akin to other souls because it is a soul, and this is why it has an inclination toward a body. Because it is rational, it has an inclination toward a human body. Because it is noble, it has an inclination toward a nobly organised body. And it has an inclination toward a certain body rather than toward another due to the connection which it had to it ... The soul is united to the substance of the flesh which it vivified earlier with such an affection that it is not satisfied unless it receives the same flesh, wherever it is hidden. Thus, it is clear that the soul has an orientation and desire by which it is ordained to the same body, however much it might be conformed to others. (Bonaventura, *Commentaria in quatuor libros sententiarum* IV.43.5)

c. The proper object of the sense of touch is the interior condition of its own organ. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 61 (II, 578))

d. The object of the sense of touch is the whole group of features in which the appropriate or inappropriate constitution of the body of the animal may consist. And if you wish to specify this to the human sense of touch, the object of the

human sense of touch is the whole group of features in which the constitution of the human body may be perfected or forsaken. (*Quaestiones in secundum librum Sententiarum* 61 (II, 585))

e. The things mentioned are perceived by the senses, and often without any first or second quality. Thus, when I write this, there is a pain in my neck. There is something sufficiently sensible in this, but I cannot perceive in it any other first or second sensible quality of the kind discussed above but the pain. Also, what would be the first or second quality which is perceived in coitus, apart from the joining of the fitting with the fitting which is pleasure. (Pietro d' Abano, *Conciliator differentiarum philosophorum et precipue medicorum* 77 (117vb))

Awareness of the body is rarely related to self-consciousness in medieval discussions, although it was taken for granted that the body is an important part of the self. The idea that man is a soul in exclusion of the body was called 'Plato's view' and it was deemed to be false (see e.g., Thomas Aquinas, *Summa theologiae* I.76.1). The soul was generally taken to be embodied in a rather deep manner, especially in respect to the sensory functions shared with other animals, whose souls were thought to be inseparable from their bodies. Thus, to defend the immortality of the soul, Aelred of Rievaulx argued that there is something incorporeal in the soul, listing the embodied functions of the soul and then asking if any of them might be of any help in intellectual thinking (**a**). According to Christian faith, resurrection on Judgement Day involves humans as embodied beings and not as mere souls. This doctrine raises philosophical problems concerning the identity of the resurrected body. For discussion, see Bynum 1995. Bonaventura's solution to this distinctively medieval problem is that the body to which the soul is united is the same body, and that the soul somehow recognises its own body and desires the union with the same body to which it was united when the human being was alive. Thus, the soul has some sense of owning its body (**b**). The soul's apprehension of the body was addressed also in discussions concerning the unity and the scope of the sense of touch. Olivi argues, in opposition to the Aristotelian view, that the proper object of the sense of touch is the whole body (**c**, **d**). In medical writings, bodily pain and pleasure are also addressed as modes of self-perception (**e**). See Yrjönsuuri 2006, 2008a.

Chapter 28

Early Modern Theories

Vili Lähteenmäki

The notion of consciousness was used by early modern philosophers in various ways. In dualist ontologies, the nature of thought was often characterised with the help of consciousness: while matter was understood as extended in space, thought was taken to be that which is accompanied by consciousness. Whether the mind always thinks and whether mental activity in its entirety is conscious were among the questions which addressed the relation between thought and consciousness. The possibility of unconscious thought was generally overlooked. For example, Locke rejected the Cartesian tenet that we always think by appealing to particular phenomena which suggest that we do not always think, such as dreamless sleep: we often retain no memory of having been conscious during the course of sleep. But he never considered a notion of thought that does not entail the idea of consciousness. It was Leibniz who introduced the idea of mental phenomena coming both as conscious and unconscious.

Concerning the general status of consciousness in early modern thought, it is important to remember that discussions of the nature of consciousness as such were rare. Furthermore, in accordance with the medieval tradition, consciousness was often understood as guaranteeing certainty, especially of one's own existence. It seems that consciousness was, by and large, understood as an epistemic notion, in the sense that consciousness allows us familiarity with the mental phenomena of our own minds, rather than as a notion referring merely to the qualitative or phenomenal aspects of experience. It must be noted, though, that early modern authors did not explicitly discuss this issue.

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Awareness of oneself as the subject of thought and action is one of the more specific contexts in which discussions of consciousness arise. In particular, the diachronic and synchronic unity of *person* (that is, a person's identity both across time (diachronic) and in a particular moment (synchronic)) was explored in terms of consciousness. One distinction between ways of relating to the subject is found in the separation of explicit self-consciousness from more elementary self-consciousness: in addition to explicit self-consciousness, some authors also emphasised that, in cases where the primary object of perception is an external one, the subject of perception is still conscious of herself as the perceiver of things. In a similar way, the subject of action was taken to be aware of herself as the doer of things. In explaining these phenomena, early modern authors referred to different kinds of reflexive relations within the mind (for instance, by distinguishing between inherent and voluntary reflectivity).

Descartes characterised thinking as always accompanied by the subject's awareness of it and argued that the mind must constantly think since the essence of the mind is to think. The mind would cease to exist if it ceased to think. This means that for instance in sleep, the mind is always dreaming and conscious of at least the representational content of the dreams, although perhaps not of the further fact that the type of mental activity it is engaged in is dreaming. While Locke agrees with Descartes that we cannot have thoughts of which we are not aware, he maintains that we do not always think, since consciousness is essentially linked to the concept of thought and not to the concept of soul or mind. Leibniz forms an important exception in allowing unconscious thought. By subscribing to unconscious perceptions Leibniz could agree with Descartes that the mind has a constant flux of perceptions, without accepting that the subject must be conscious of all of them (1).

One important context in which consciousness received attention was that of synchronic and diachronic unity of *person*. Locke famously argued that personal identity consists in the psychological capacity to consider oneself as oneself, rather than in the possession of an immaterial soul, and that it is consciousness in particular that provides us with this capacity. According to Cudworth, due to its reflexive nature, consciousness allows the subject of thought and action to be present to herself in such a way that the subject is able to explicitly reflect on her thoughts and actions. Such reflection is necessary for conducting a moral life. Arnauld and Reid emphasised a similar distinction between the two ways in which consciousness is reflexive. Both understood consciousness as reflexive, in the sense that it always has a subject or 'owner'. From this they distinguished attentive reflection, which is a higher-order voluntary act. Hume, for his part, maintained that while it seems clear that we are continuously conscious of ourselves, at the same time there appears to be no such thing as the *self* as a distinct being (2).

Consciousness was also used in discussions of certainty. Descartes famously held that from the fact that he thinks he knows for certain that he exists. Locke maintained, in a way similar to Descartes, that the idea that consciousness always involves a subject has the added feature that we can be certain to the highest degree of our own existence. Descartes also argued that when human actions are considered in reference to bodily acts, our conclusions about them are not certain;

however, when they are understood as the subject's awareness of her actions, our conclusions are warranted. Malebranche, for his part, argued that to know the mind fully it is not enough to know it only through consciousness. Cudworth maintained that the self-relation afforded by consciousness gives us certainty about our capabilities for explicit consideration of ourselves (3).

While the question of how something merely material could be solely responsible for mental reality was not prominent in the seventeenth century, it did receive considerable attention towards the end of the century and into the eighteenth century. The thesis that human activity in its entirety is explainable in terms of local motions arose most notably from Hobbes's materialist ontology. Leibniz argued against it by saying that no amount of knowledge of the material motions would suffice to explain the existence and nature of mental phenomena. According to Descartes, the mental differs in kind from the bodily, and it is thus impossible for consciousness to emerge from matter. Locke was an interesting exception. While he did not positively argue that matter as such could bring consciousness about, he maintained that we do not know any better whether soul can do this; for all we know, God may superadd thinking to matter. This view motivated Anthony Collins to argue for the possibility of thought and consciousness as emerging from material systems (4).

While it generally holds that the nature of consciousness was not a distinct topic for the early moderns, it was directly addressed in at least two ways. In relation to both mechanical explanations and the question of personal identity, it was argued that consciousness is a real entity, and does not simply accompany local motion and thus constantly change in accordance with the changes of the material constitution of the organism (5). Another direct consideration of consciousness was the idea that consciousness as a phenomenon is so obvious that any attempt at its explanation is either unnecessary, or bound to fail in capturing the nature of it. Any conscious being already has a knowledge of consciousness by virtue of being conscious herself, and this knowledge is the best we can hope to have; any further attempt to explain consciousness is therefore superfluous (since we already have a knowledge of consciousness) or inadequate (since it explains nothing more than we already know) (6).

1 Consciousness and Thought

a. I take the term thought to encompass everything within us of which we are immediately conscious. Therefore all operations of the will, intellect, imagination, and sense are thoughts. But I add 'immediately' to exclude their consequences: a voluntary movement has a thought as its origin but is not, however, itself a thought. (Descartes, *Second Replies*, AT VII, 160)

b. I understand by 'thought' everything that happens within us when we are conscious, in so far as there is consciousness of it in us. For that reason, not only understanding, willing and imagining but also sensing count as thinking. (Descartes, *Principles* I.9, AT VIII A, 7–8)

c. It seems to me self-evident that there can be nothing in the mind of which it is not conscious, in so far as the mind is a thinking thing. For there is nothing we can understand as being in the mind, seen as a thinking thing, which is not a thought or something that depends on a thought; anything that is not a thought or dependent on a thought, in so far as the mind is a thinking thing, could not belong to the mind. And there cannot be in us a thought of which we are not conscious at the exact moment when it is in us. This is why I do not have any doubt that the mind begins to think immediately when it is implanted in the body of an infant and that the mind is immediately conscious of its thought, although it does not remember it afterwards because the representations of these thoughts do not remain in the memory. It is noteworthy that although we are always actually conscious of the operations of the mind, this is not the case regarding our faculties or powers, except potentially; so that when we set about to use one of our faculties, if that faculty belongs to the mind, we become at once actually conscious of it; and hence we can deny that something belongs to the mind, if we are not capable of becoming conscious of it. (Descartes, *Fourth Replies*, AT VII, 246)

d. If they say, The Man thinks always, but is not always conscious of it; they may as well say, His Body is extended, without having parts. For 'tis altogether as intelligible to say, that a body is extended without parts, as that anything *thinks without being conscious of it*, or perceiving, that it does so. They who talk thus, may, with as much reason, if it be necessary to their Hypothesis, say, That a Man is always hungry, but that he does not always feel it: Whereas hunger consists in that very sensation, as thinking consists in being conscious that one thinks. If they say, That a Man is always conscious to himself of thinking; I ask, How they know it? Consciousness is the perception of what passes in a Man's own mind. Can another Man perceive, that I am conscious of anything, when I perceive it not myself? No Man's Knowledge here, can go beyond his Experience. Wake a Man out of a sound sleep, and ask him, What he was that moment thinking on. If he himself be conscious of nothing he then thought on, he must be a notable Diviner of Thoughts, that can assure him, that he was thinking. (Locke, *Essay Concerning Human Understanding* II.1.19)

e. I do not say there is no Soul in a Man, because he is not sensible of it in his sleep; But I do say, he cannot think at any time waking or sleeping, without being sensible of it. Our being sensible of it is not necessary to any thing, but to our thoughts; and to them it is; and to them it always will be necessary, till we can think without being conscious of it. (Locke, *Essay Concerning Human Understanding* II.1.10)

f. III P9: *The mind, both in so far as it has clear ideas and in so far as it has distinct ideas, strives to stay in its being for an indefinite length of time, and of this striving it is conscious.*

Demonstration. The essence of the mind is constituted by adequate and inadequate ideas (as we have shown in Proposition 3), and so (by Proposition 7) the mind strives to stay in its being in so far as it has them, and (by Proposition 8) it does so for an indefinite length of time. But as the mind (by Proposition 23, part 2)

is necessarily conscious of itself by virtue of the ideas of the affections of the body, it is therefore (by Proposition 7) conscious of its own striving. Q.E.D.

Scholium. This striving is called ‘will’ when it is referred only to the mind, but when it is referred to the mind and body together, it is called ‘appetite’. Appetite is therefore nothing other than the essence of man, from the nature of which those things that contribute to its preservation follow necessarily; and so man is determined to do those things. Moreover, there is no difference between appetite and desire, except that human beings are usually said to have desires when they are conscious of their appetites; and thus desire can be defined as appetite that is accompanied by consciousness thereof. From all this it is established that we do not strive for, will, want, or desire anything because we judge something to be good; on the contrary, we judge something to be good because we strive for, will, want, or desire it. (Spinoza, *Ethica in Opera*, vol. II, 147–148)

g. It is in order to distinguish between perception that is the internal state of a monad representing external things and apperception that is the consciousness or the reflexive knowledge of that internal state, not given to all souls, nor always to a given soul. And because of lacking this distinction the Cartesians went wrong, counting perceptions of which we are not conscious as nothing, just as laymen take imperceptible bodies to be nothing. For this reason the same Cartesians believe that only minds are monads, that animals have no soul, and still less other principles of life. (Leibniz, *Principes de la nature et de la grâce fondés en raison* 4 (600))

h. There are a thousand indications that prompt us to judge that every moment we have an infinity of perceptions in us, but without apperception and without reflection, that is, there are changes in the soul itself that we do not apperceive, because the impressions are too small and too many or too closely joined with one another so that none of them stands out on its own, but together they do not fail to have an effect and make themselves felt, at least confusedly in the whole. (Leibniz, *Nouveaux Essais sur l’entendement humain*, preface (46–47))

Descartes is novel with respect to scholasticism in maintaining that the functions of organisms that used to be referred to the vegetative and the sensitive souls should be explained on mechanical principles alone. At the same time, he includes sensations within the realm of (rational) soul insofar as they are taken as appearances to the mind, and not merely as bodily events (**a**, **b**, **c**). See Radner 1988; Lähteenmäki 2007. While Descartes holds that conscious thought is essential to soul, Locke sees an essential relation only between thought and consciousness (**d**, **e**). See McRae 1976; Kulstad 1984; Lähteenmäki 2008. Spinoza stands out because of his monism, and by contrast

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with many others, he holds that consciousness is not what characterises immaterial substance or mind in particular (**f**). Different approaches to Spinoza's view of consciousness have been suggested by recent scholarship. Some argue that it is to be found in his doctrine of the idea of an idea; others say that consciousness should be understood in relation to the complexity of the body's constitution (for discussion, see Nadler 2008; Garrett 2008). Leibniz introduces the idea of mental events of which the mind is not conscious (**g, h**). See McRae 1976; Jorgensen 2009, forthcoming.

2 Consciousness and Reflectivity

a. [T]o find wherein *personal Identity* consists, we must consider what *Person* stands for; which, I think, is a thinking intelligent Being, that has reason and reflection, and can consider it self as it self, the same thinking thing in different times and places; which it does only by that consciousness, which is inseparable from thinking, and as it seems to me essential to it: It being impossible for any one to perceive, without perceiving, that he does perceive. When we see, hear, smell, taste, feel, meditate, or will anything, we know that we do so. Thus it is always as to our present Sensations and Perceptions: And by this everyone is to himself, that which he calls *self*: It not being considered in this case, whether the same *self* be continued in the same, or divers Substances. For since consciousness always accompanies thinking, and 'tis that, that makes everyone to be, what he calls *self*; and thereby distinguishes himself from all other thinking things, in this alone consists *personal Identity*, *i.e.* the sameness of a rational Being: And as far as this consciousness can be extended backwards to any past Action or Thought, so far reaches the Identity of that *Person*; it is the same *self* now it was then; and 'tis by the same *self* with this present one that now reflects on it, that that Action was done. (Locke, *Essay Concerning Human Understanding* II.27.9)

b. *Duplication* [...] is included in the Nature of *sunaesthêsis*, *Con-sense* and *Consciousness*, which makes a Being to be Present with it self, Attentive to its own Actions, or Animadversive of them, to perceive it self to Do or Suffer, and to have a *Fruition* or *Enjoyment* of it self. (Cudworth, *The True Intellectual System of the Universe* (159))

c. The thoughts and feelings of which we are conscious are continually changing, and the thought of this moment is not the thought of the last; but something which I call myself, remains under this change of thought. This self has the same relation to all the successive thoughts I am conscious of – they are all my thoughts; and every thought which is not my thought, must be the thought of some other person.

If any man asks a proof of this, I confess I can give none. (Reid, *Essays on the Intellectual Powers of Man* VI.5.2)

d. *Thought* or *perception* is essentially reflexive on itself, or, as it is said better in Latin, *est sui conscia*. For I do not think without knowing that I think; I do not know a square without knowing that I know it; I do not see the sun, or, to express this so that it is beyond doubt, I do not imagine seeing the sun without being certain that I imagine seeing it. Sometime afterwards I may not remember having known this or that thing, but at the moment when I know it I know that I know it. [...] In addition to a type of reflection that may be called *virtual*, one that is present with all our perceptions, there is another one, which is more *express*, whereby we examine our perception by means of another perception. (Arnauld, *Des vraies et des fausses idées* 6 (52))

e. [R]eflection ought to be distinguished from consciousness, with which it is too often confounded even by Mr Locke. All men are conscious of the operations of their own minds, at all times, while they are awake; but there are few who reflect upon them, or make them objects of thought. [...] And, although the mind is conscious of its operations, it does not attend to them; its attention is turned solely to the external objects, about which these operations are employed. [There is a] difference between consciousness of the operations of our minds, and reflection upon them; [...] we may have the former without any degree of the latter. [...] Attention is a voluntary act; it requires an active exertion to begin and to continue it, and it may be continued as long as we will; but consciousness is involuntary and of no continuance, changing with every thought. (Reid, *Essays on the Intellectual Powers of Man* I.5)

f. *Consciousness*, in the most strict and exact Sense of the Word, signifies neither a *Capacity of Thinking*, nor yet *Actual Thinking*, but the *Reflex Act by which I know that I think, and that my Thoughts and Actions are my own and not Another's*. (Clarke, *A Second Defence...* (1731), 149–150; in *The Works of Samuel Clarke*, vol. III (784))

g. [All our particular perceptions] are different, and distinguishable, and separable from each other, and may be separately consider'd, and may exist separately, and have no need to any thing to support their existence. [...] For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch *myself* at any time without a perception, and never can observe any thing but the perception. When my perceptions are remov'd for any time, as by sound sleep; so long am I insensible of *myself*, and may truly be said not to exist. (Hume, *A Treatise of Human Nature* I, IV.6.3)

h. 'Tis evident, that as we are at all times intimately conscious of ourselves, our sentiments and passions, their ideas must strike upon us with greater vivacity than the ideas of the sentiments and passions of any other person. (Hume, *A Treatise of Human Nature* II, II.2.15; similar passages are II, I.11.4; II, I.2.2)

In addition to noting the relations between the mind, thought, and consciousness, many thinkers placed emphasis on the point that the subject of thought is not only conscious of thoughts (or what the thoughts are about) but also of the ‘I,’ the subject or the self who has the thoughts. This conviction about an inherent self-reflexivity of conscious thought that particularly concerns the ‘owner’ of thoughts was expressed in different ways (**a**, **b**, **c**; see also **3a**). Arnauld and Reid explicitly drew a further distinction between an inherent or concomitant reflexivity and an explicit or voluntary reflection on one’s thoughts. It seems rather clear that such explicit reflection can be directed not only at thoughts but also the subject of thought, though they did not emphasise this (**d**, **e**). Clarke, for his part, asserted that in its correct meaning consciousness stands only for the explicit reflective act by virtue of which a subject knows her thoughts to be her *own* thoughts (**f**). Hume indicated that positing ‘self’ as a subject constantly present in all thought is problematic, but he acknowledged that we do have an experience of such a self (**g**, **h**). See Ainslie 2001; Copenhaver 2006b (and the references given there); Lähteenmäki 2008, 2010; Thiel 1991, 1994, 2006; for Locke in particular, see the subject index for ‘person’ and ‘personal identity’ of *John Locke Bibliography* (<http://www.libraries.psu.edu/tas/locke/bib/sp.html>) for an extensive list of references.

3 Consciousness and Certainty

a. And lastly, observing that all the same thoughts that we have when we are awake could also occur when we are asleep without any of them being true at that moment, I decided to pretend that everything that had ever entered my mind were no more true than the illusions of my dreams. But I realised immediately that while I tried, in this way, to take everything as false, it was necessary that I, who was thinking this, had to be something. And taking notice that this truth ‘I think, therefore I am’ was so firm and certain that even the most extravagant suppositions of the sceptics were incapable of shaking it, I judged that I could welcome it with no hesitation as the first principle of the philosophy that I was seeking. (Descartes, *Discourse on the Method*, AT VI, 32)

b. As for *our own Existence*, we perceive it so plainly, and so certainly, that it never needs, nor is capable of any proof. For nothing can be more evident to us, than our own Existence. *I think, I reason, I feel Pleasure and Pain*; can any of these be more evident to me, than my own Existence? If I doubt of all other Things, that very doubt makes me perceive my own *Existence*, and will not suffer me to doubt of that. For if I know *I feel Pain*, it is evident, I have as certain a Perception of my own Existence, as of the Existence of the Pain I feel: Or if I know *I doubt*, I have as certain a Perception of the Existence of the thing doubting, as of that Thought,

which I call *doubt*. Experience then convinces us, that *we have an intuitive Knowledge of our own Existence*, and an internal infallible Perception that we are. In every Act of Sensation, Reasoning, or Thinking, we are conscious to our selves of our own Being; and, in this Matter, come not short of the highest degree of *Certainty*. (Locke, *Essay Concerning Human Understanding* IV.9.3)

c. For if I say ‘I see or I walk, therefore I exist’ and take seeing or walking as bodily events, the conclusion is not absolutely certain, because it can seem to me that I see or walk even though my eyes are closed and I am not moving about, as it often happens in dreams; and this could even happen if I had no body at all. However, if I take seeing or walking as the sense or consciousness of seeing or walking, the conclusion is plainly certain, because sense or consciousness relates to the mind, which alone senses or thinks that it is seeing or walking. (Descartes, *Principles* I.9, AT VIII A, 7–8)

d. But who does not see that there is an utter difference between knowing through a clear idea and knowing through *consciousness*? When I know that two times two is four, I know this very clearly, but I do not know clearly that which in me knows it. It is true that I sense it; I know it through consciousness or internal sensation. But I do not have a clear idea of it as I have of numbers, between which I can clearly find relations. (Malebranche, *De la recherche de la vérité, Eclaircissement* XI (167))

e. We are certain by inward sense that we can reflect upon ourselves and consider ourselves, which is a reduplication of life in a higher degree. For all cogitative beings as such, are self-conscious. (Cudworth, *A Treatise of Freewill in A Treatise Concerning Eternal and Immutable Morality with Treatise of Freewill*, p. 201)

f. As by consciousness we know certainly the existence of our present thoughts and passions; so we know the past by remembrance. (Reid, *Essays on the Intellectual Powers of Man* I.2.2)

Consciousness was by and large understood as an epistemic notion in itself, but it was also relied on as guaranteeing certainty with respect to our own existence, existence of our mental acts, and our capabilities to reflect on ourselves. Through a method of doubt Descartes searched for an Archimedean point on which to build a whole philosophical system and found it in the impossibility to extend his doubt to the fact that he who performed the conscious act of doubting, existed (**a**, **e**). In a similar way, Locke took our knowledge of our own being to be evident in all our mental acts (**b**). Malebranche, in contrast, maintained that while consciousness undoubtedly affords us with a sense of self, we do not thereby have a clear idea of what it is in us that thinks (**d**). Reid pointed out that by consciousness we have certainty of the existence of our mental acts (**f**, cf. **2c**, however), and Cudworth, who applies his notion of consciousness mostly in the context of moral agency, took us to be certain of our ability to reflect on ourselves (**e**).

4 Consciousness and Mechanical Explanation

a. The cause of sense is the external body, or object, which presseth the organ proper to each sense, either immediately, as in the taste and touch, or mediately, as in seeing, hearing, and smelling; which pressure, by the mediation of the nerves and other strings and membranes of the body continued inwards to the brain and heart, causeth there a resistance, or counter-pressure, or endeavour of the heart to deliver itself, which endeavour, because outward, seemeth to be some matter without. And this seeming or fancy is that which men call sense and consisteth, as to the eye, in a light or colour figured; to the ear, in a sound; to the nostril, in an odour; to the tongue and palate, in a savour; and to the rest of the body, in heat, cold, hardness, softness, and such other qualities as we discern by feeling. All which qualities, called sensible are in the object that causeth them but so many several motions of the matter, by which it presseth our organs diversely. Neither in us that are pressed are they anything else but divers motions; (for motion produceth nothing but motion). (Hobbes, *Leviathan* I.1)

b. There are other acts that we call acts of thought, such as understanding, willing, imagining, sensing, etc. All of them are subsumed under the common concept of thought or perception or consciousness. The substance in which they inhere we call thinking thing or mind; or we can call it by any other name as long as we do not confuse it with the corporeal substance, because acts of thought have nothing in common with corporeal acts and *thought*, which is the concept that covers acts of thought, differs in kind from *extension*, which is the concept that covers corporeal acts. (Descartes, *Third Replies*, AT VII, 176)

c. [N]either can Life and Cogitation, Sense and Consciousness, Reason and Understanding, Appetite and Will, ever result from Magnitudes, Figures, Sites and Motions. (Cudworth, *The True Intellectual System of the Universe* (36))

d. It must be confessed that perception and what depends on it are inexplicable on mechanical principles, that is, by means of shapes and motions. Supposing there is a machine whose structure enables it to think, sense, and have perception, it could be conceived as enlarged so that it retains the same proportions and so that one could enter into it as into a mill. This provided, by examining it inside, one would find only parts pushing other parts and never anything that explains a perception. Perception should thus be sought in the simple substance and not in the composite or machine. (Leibniz, *Monadologie* 17 (609))

e. We have the *Ideas* of *Matter* and *Thinking*, but possibly shall never be able to know, whether any mere material Being thinks, or no; it being impossible for us, by the contemplation of our own *Ideas*, without revelation, to discover, whether Omnipotency has not given to some Systems of Matter fitly disposed, a power to perceive and think, or else joined and fixed to Matter so disposed, a thinking immaterial Substance: It being, in respect of our Notions, not much more remote from our Comprehension to conceive, that GOD can, if he pleases, superadd to

Matter a Faculty of Thinking, than that he should superadd to it another Substance, with a Faculty of Thinking. (Locke, *Essay Concerning Human Understanding* IV.3.6)

f. And Matter of Fact is so plain and obvious, that a Man cannot turn his Eye, but he will meet with material Systems, wherein there are individual Powers, which are not in every one, nor in any one of the Particles that compose them, when taken apart and considered singly. Let us instance, for example, in a *Rose*, that consists of several Particles, which separately and singly want a Power to produce that agreeable Sensation we experience in them when united. And therefore either each of the Particles in that Union contributes to the individual Power, which is the external Cause of our Sensation; or else God Almighty superadds the Power of producing that Sensation in us, upon the Union of the Particles: and this, for ought I can see, may be the case of Matter's Thinking. (Collins, *A Reply to Mr. Clarke's Defence ...*, 109–110; in *The Works of Samuel Clarke*, vol. III (751–752))

Conscious thought was most typically associated with the immaterial soul. Although Hobbes does not spell out his materialist thesis with regard to consciousness in particular, he hints at consciousness by talking of 'seeming' and 'fancy.' In any case, he is clear that what we would subsume under 'sensation' is in the end nothing but a motion of matter (**a**). Descartes consistently maintained that matter and thought share no properties (**b**), and Cudworth, for his part, was determined that material events can never produce consciousness (**c**). Leibniz was not so much concerned with the matter-mind distinction, but placed emphasis on the insufficiency of mechanical explanation in showing how perception comes about (**d**). Taking seriously our epistemic constraints, Locke remained agnostic about the substance underlying conscious thought, maintaining that God could endow immaterial soul as well as matter with the power of thinking (**e**). Collins was more persistent than Locke in arguing that matter could give rise to consciousness (**f**). See Leijenhorst 2002; Wee 2005; McRae 1976; Rozemond 2008, 2009.

5 Consciousness as a Real Entity

a. [A] Modern Atheistick Pretender to Wit [with Leucippus and Democritus], hath publicly owned this same Conclusion, That *Mind is Nothing else but Local Motion in the Organick parts of Mans Body*. These men have been sometimes indeed a little Troubled, with the *Phancy, Apparition, or Seeming of Cogitation*, that is The *Consciousness* of it, as knowing not well what to make thereof; but then they put it off again, and satisfie themselves worshipfully with this, that *Phancy* is but *Phancy*, but the *Reality of Cogitation*, nothing but *Local Motion*; as if there were not as much *Reality in Phancy and Consciousness*, as there is in *Local Motion*. (Cudworth, *The True Intellectual System of the Universe* (846))

b. If therefore, you will answer, (which is the only possible seeming Evasion in this Case) that That what we call *Consciousness*, is not a *fixt individual numerical Quality*, like the numerical Figure or Motion of a solid Body; but a *fleeting transferrible Mode or Power*, like the Roundness or the Mode of Motion of Circles upon the Face of a running Stream; And that a *Person* may still be the same, by a continual Superaddition of the *like Consciousness*; notwithstanding the Whole *Substance* be changed: Then I say, you make *Individual Personality* to be a mere *external imaginary Denomination*, and nothing at all in reality. (Clarke, *A Third Defence ...*, 290; in *The Works of Samuel Clarke*, vol. III (844))

One of the few ways in which consciousness was addressed as a distinct topic concerned its status as a real entity. Cudworth opposed the materialist thesis that mental events are reducible to material motions in their entirety. He points out that the materialists stop short in their explanations of consciousness as nothing but local motion, insisting himself that consciousness is an entity in its own (**a**, cf. **4a**). Indeed, for him the spiritual is nobler than the material, and matter can never give rise to immaterial phenomena (see, e.g., *True Intellectual System of the Universe*, 151). Clarke in his debate with Collins defended consciousness as an unchanging thing dependent on an immaterial system, against the idea that consciousness is, so to speak, ‘realised anew’ every time a change occurs in the material constitution of the organism that is supposed to give rise to it (**b**). For discussion of the Clarke-Collins debate, see Rozemond 2008, 2009; Uzgalis 2008, 2009.

6 Obviousness of Consciousness

a. [E]ither there is nothing considerable and extraordinary in it [i.e. consciousness]; or else so very little, and withal so obvious to the meanest Capacity at first sight, that it needs not to be particularly declared, or it does not admit of any sort of Explication. And how it should come to pass I know not, but so we find it is, that every one imagines, he discovers as much of his *Consciousness*, immediately, or at one single View, (which lies within a very narrow Compass) as he shall ever be able to do; and that 'tis in vain to search and enquire, or use any Thought or reflection about it. (Charles Mein, *Two Dissertations Concerning Sense and the Imagination with An Essay on Consciousness* (142))

b. Every Man feels and knows by Experience what Consciousness is, better than any Man can explain it: Which is the case of all simple ideas. (Clarke, *Second Defence ...* (1731), 166; in *The Works of Samuel Clarke*, vol. III (790))

c. *What Perception is*, every one will know better by reflecting on what he does himself, when he sees, hears, feels, *etc.* or thinks, than by any discourse of mine. Whoever reflects on what passes in his own Mind, cannot miss it: And if he does not reflect, all the Words in the World, cannot make him have any notion of it (Locke, *Essay Concerning Human Understanding* II.9.2)

Another way in which consciousness was discussed explicitly concerned its being obvious to any conscious subject (**a**, **b**). It is noteworthy that both of these statements are from the early eighteenth century, when discussions of topics where consciousness is pertinent had been around for a good while. At the very least, this makes it plausible to suppose that consciousness would at this point elicit more direct interest than it had done for much of the seventeenth century. Locke's statement about the simple idea of 'perception' can also be taken as an allusion to obviousness of consciousness (**c**). Clarke may well have this passage in mind (**b**).

Part X

Emotions

Chapter 29

Emotions from Plato to the Renaissance

Simo Knuuttila

One of the many uses of the ancient Greek word *pathos* referred to what we call emotions; the corresponding Latin words were *passio* or *affectio*. While some historians prefer the term ‘passion’ to ‘emotion’ in dealing with older theories, both terms, when used in psychological contexts, are used synonymously here. Plato introduced the analysis of emotions into philosophy as part of his famous tripartition of the soul in book IV of the *Republic*. The appetitive part (*epithumētikon*) seeks sensual pleasure and avoids suffering, whereas the spirited part (*thumoeides*) is the seat of emotions connected with self-affirmation and aggression. The reasoning part (*logistikon*), the subject of knowledge and rational value attitudes, should govern the emotional parts by controlling the movements of the appetitive part and habituating the spirited part to support good conduct. Plato supplied the emotional parts with a measure of independent cognitive evaluation, as well as pleasant and unpleasant feelings and action-initiating power (1).

Like Plato, Aristotle regarded emotions as passive psychosomatic reactions which were anchored in the emotional power of the soul and divided into concupiscent and irascible types. He further developed Plato’s remarks on the constitutive elements of occurrent emotions, distinguishing between four basic aspects as follows. The *cognitive* element is an occurrent evaluation that something positive or negative is happening or may happen to the subject or to others in a way which concerns the subject. Second, the *affective* element is a pleasant or unpleasant feeling about the content of an emotional evaluation. Third, the *dynamic* element is a behavioural impulse towards action which typically accompanies emotional evaluation. Fourth, there are typical *physiological* changes. Aristotle had a more positive view of emotions than Plato, who stressed the controlling and mastering of emotions. According to Aristotle, learning to feel emotions well is part of acquiring the virtues of character which are essential for a good life (2).

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The Stoics argued for the unity and rationality of the human soul and, consequently, rejected the idea of a special emotional part of the soul. Instead of treating emotions as a part of the natural constitution of human beings, they saw emotions to be essentially an acquired habit of forming value judgements, by which people mistakenly evaluate things from their subjective perspectives. Learning to identify oneself as a representative of cosmic rationality makes emotions disappear. The best-known part of Stoic philosophy is the philosophical therapy of emotions (*therapeia*) which is known through the works of Cicero, Seneca and Epictetus. Stoic therapy aims at *apatheia*, the extirpation of emotions. This therapy is cognitive because emotions are regarded as value judgements. In response to criticism of their theory, Stoic philosophers developed the idea of first movements: these ‘pre-emotions’ may occur in Stoic persons even after achieving *apatheia*; they also developed a theory of ‘good emotions’ (*eupatheiai*), which are the serene value attitudes of the perfectly rational Stoic sage (3). Most other Hellenistic philosophers followed the psychological conception of Plato and Aristotle. They argued for the moderation of emotions (*metriopatheia*), considering the Stoic extirpation program to be inhuman and psychologically misguided. A less radical version of the freedom of emotions was also defended by some Neoplatonic thinkers (4).

The Alexandrian theologians Clement and Origen combined Stoic and Platonist ideas, arguing that *apatheia* was part of Christian perfectibility, and a precondition for divinization. This mystical union was described in highly emotional language, although the experiences associated with it were separated from emotions. While the ideal of apathetic divinization influenced monastic spirituality, the rhetoric of *metriopatheia* became more dominant among early Christian theologians, including Augustine. The Stoic doctrine of ‘first movements’ was applied to sin by Origen, who was followed by Augustine and many others. These considerations were incorporated into medieval discussions of sin and intentionality, which continued and systematised monastic introspective psychology (5).

Two Arabic works strongly influenced the Latin discussions of emotions: the early medieval translations of the medical encyclopaedia of ‘Alī ibn al-‘Abbās al-Mağūsī, which was called the *Pantegni*, and the sixth book of Avicenna’s *Shifā’* (*De anima*). Medieval and Renaissance medical theories of emotions concentrated on the Galenic ideas of humours, movement of the spirits, and natural heat (6). Many early-medieval Latin authors were influenced by Avicenna’s faculty psychology and his understanding of emotions as acts of the sensory motive powers. In Avicenna’s theory the emotions have the same constituents as in Aristotle – in fact, all medieval theories of the passions of the sensory soul adhered to this view of constituents. One problem that arose in the reception of Avicenna (and other traditional sources) was how to reconcile the various divisions between appetitive (concupiscible) and spirited (irascible) emotions in these texts with Aristotle’s view, which was increasingly taken to be authoritative in the thirteenth century. An influential new idea for solving this taxonomical problem was that, whereas the objects of contrary concupiscible emotions are simply pleasurable or painful, the objects of the irascible emotions are, in addition, arduous, being difficult to obtain or to avoid. One of the early applications of this division is found in the taxonomy of emotions

in John of la Rochelle's *Summa de anima*, (c. 1240). This very detailed classification was also influenced by Avicenna's psychology (7). The same psychological model of simple and arduous emotions was applied by Albert the Great and Thomas Aquinas. While Albert employed various traditional classifications of emotions, Thomas Aquinas put forward a new taxonomy which simplified John of la Rochelle's approach. Albert argued that emotions should be regarded as qualities, as Aristotle described them in *Categories* 8; Aquinas treated them as motions of the soul which could be analysed with the help of Aristotle's doctrine of contrary movements in *Physics* V.5. Aquinas's theory of emotions, the most extensive of its kind in medieval literature, involves detailed terminological, psychological and ethical remarks about each particular type of emotion. Like all medieval authors, Aquinas argues that the will as a rational power should control emotions, and he also criticises the Stoic *apatheia*. His theory and taxonomy were very influential through until the seventeenth century (8).

John Duns Scotus regarded the various systematisations of emotions according to the schema of arduousness to be artificial, and he refuted the influential Avicennian idea that the motive power is moved by 'intentions' in things which are grasped by the estimative power. In Scotus's view, it is sufficient to state that representations of a certain kind cause certain behavioural changes in some animals and not in others. The original part of Scotus's theory is his questioning of the sharp divide between the passions of the sensory soul and the analogous phenomena in the will. Joy and distress as the passions of the will, he says, are not among its free acts, and they may be caused by apprehensions of what takes place with respect to actual volitions or nolitions or the inclinations of the will and the sensory part of the soul. Recognising that intellectual feelings strongly influence behaviour, Scotus shifts the discussion of moral virtues from the sensory passions to the intellectual soul. Scotus also treats liking and dislike, the non-deliberated first reactions and concomitants of other acts of the will, as analogous to sensory emotional reactions, except that they are free acts. Ockham's theory of emotions is based largely on Scotus's ideas. Ockham's student, Adam Wodeham, argued that volitions and nolitions are value judgment to which all human emotions can be reduced because of the unity of the soul. This reduction of emotions to judgements is similar to the Stoic theory, although Wodeham does not refer to Stoic authors. John Buridan, who in other respects followed Scotus and Ockham, stated that liking and disliking are not free acts (and hence are similar to sensory emotions in this respect). Buridan's modification was influential because many authors saw it as a useful analysis of the freedom of the will (9).

Despite an increasing variance of opinions, Renaissance theories of emotions did not deviate from traditional ideas concerning their cognitivity, passivity, and controllability. Sensory emotions were treated as psychosomatic phenomena, and the Galenic theory of the humours and spirits was considered relevant in this context. While scholastic authors defended Aquinas's taxonomy of eleven emotions, many were interested in Scotus's theory of the passions of the will. Justus Lipsius's defense of the Stoic ideal of freedom from emotions was a significant contribution to Neo-Stoicism. (10).

1 Emotions in Plato's Tripartite Psychology

a. If something holds the soul back when it is thirsty, must this be different from the thirsty part which drives it like a beast to drink; for as we were saying, the same thing cannot, with the same part of itself, do opposite things with respect to the same object at the same time... And does not forbidding these things arise from reason and driving and drawing from passion and disease? ... Then we may fairly assume, I said, that they are two different things: the one with which the soul reasons we may call the reasoning part of the soul, the other with which it loves and hungers and thirsts and is driven by other desires may be called the irrational and appetitive part, the companion of sundry pleasures and satisfactions. Yes, he said, we may fairly assume this ... Then let us take it, I said, that we have shown that there are these two things in the soul. What about spirit, that which makes us act in a spirited way? Is it a third, or is it akin to one of the others? I should be inclined to say, he said, that it is akin to the appetitive part.

Well, I said, I have heard a story which I believe. Leontius, the son of Aglaion, was coming up one day from the Piraeus, below the northern wall on the outside, and he saw the executioner and some dead bodies lying on the ground beside him. He wanted to look at them, but at the same time he felt disgust and held himself back. For a time he struggled and covered his eyes, but then the desire got the better of him, and forcing his eyes open, he ran up to the bodies, saying, 'Curse you, take a good look at the lovely sight.' I have heard the story, too, he said. It shows that anger sometimes goes to war with desire, as though they were two distinct things? Yes, that is the meaning, he said. And have we not often seen people forced by their desires to do something against their reason, to curse themselves and to be angry at that which forces them, as if there were a struggle of factions, with spirit as an ally of reason? ... Just as the state was composed of three classes, traders, auxiliaries, counsellors, so does the soul also contain this third spirited part which, when not corrupted by bad education, is by nature an auxiliary to the reasoning part. (*Republic* IV, 439b–441a)

b. And those who imitated him received from him the immortal principle of the soul, around which they fashioned a mortal body. They made the whole body a vehicle and constructed within the body another kind of soul which was mortal and contained within it terrible and necessary passions – first of all pleasure, the greatest incitement to evil; then pain, which deters from good; then confidence and fear, two foolish counsellors; anger, hard to assuage; and hope, easily led astray. These they mingled with irrational sense perception, and with all-venturing love. In this way, as was necessary, they framed the mortal soul. (*Timaeus* 69c–d)

c. The argument shows that when we laugh at the folly of our friends, mingling pleasure with envy, we mingle pleasure with pain, for we have acknowledged envy to be a pain of the soul and laughter a pleasure, and these take place at the same time ... The argument explains to us that the combination of pleasure and pain takes place, not only on the stage, but in the tragedies and comedies of human life and in many other things. (*Philebus* 50b)

d. When a man is always occupied with his appetites and ambitions, and eagerly tries to satisfy them, all his thoughts are necessarily mortal, and he therefore becomes entirely mortal as far as it is possible, because he has nourished this part. But he who has been serious about the love of knowledge and true wisdom, and has exercised this part of himself more than any other part, must have immortal and divine thoughts, if he attains to truth, and he cannot fail to achieve immortality as fully as human nature is capable of sharing in it; and since he always looks after the divine part in himself and respects his inner spirit, he will be happy above all others. (*Timaeus* 90b–d)

e. So when they lie together, the wanton horse of the lover would have a word with the driver, claiming a little recompense for all his trouble. The like horse of the beloved boy has no word to say, but swelling with passion and being puzzled he embraces and kisses the lover, as if in acknowledgement of his kindness. And when they lie by one another, he is inclined to do his part in gratifying his lover's requests; yet the yoke-fellow and the driver resist, being moved by shame and reason. And if the better aims of mind win and guide them into an ordered life and philosophy, their life on earth will be happy and harmonious; they are masters of themselves and decent, for they have subjected the source of evil in the soul and liberated the source of goodness. (*Phaedrus* 255e–256b)

Plato treats the parts of the soul as if they were three separate agents: one striving for understanding, one for sensual satisfaction, and one for self-assessment (**a**). All parts are dynamic in the sense that each can initiate action, and their acts are taken to involve cognitive evaluations of their own (*Republic* IV.441a–c; VIII.550a–b, 553b–d, 560a–e). Following this model, Plato speaks about the reasoning part as appealing to emotional parts, and the emotional parts in turn either recognise the reason's authority, or are disobedient (IV.441e–442d, 443d, 444b). While some commentators criticise Plato's view as a sort of homuncular theory in which the parts of the soul are like miniature persons in themselves, it is possible to see the parts as functionally different levels of one subject. Plato also applies the tripartite psychological model to social groups in a state. In the *Laws*, he seems to operate with a dichotomy between emotional responses and reason. (For the parts of the soul and emotions in Plato, see Irwin 1995, 217–222; Cooper 1999, 118–137; Fortenbaugh 2003, 23–25.)

According to Plato, there are bodily processes which are not perceived by oneself, and others which are. Of the latter, some are perceived neutrally, some are perceived as pleasant, and others as unpleasant (*Philebus* 33d–e, 43a–c; *Timaeus* 64d). The same idea of a felt quality is also applied to emotions. In the *Philebus*, Plato remarks that emotions typically include both pleasant and unpleasant aspects (**b**). Emotions mentioned in this context are anger, fear, longing, lamentation, love, jealousy, and envy (47d–50d). Another

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group of emotions described in negative terms is found in *Timaeus* 69c–d and in *Laws* I.644c–d (c). The context of this list is Plato’s view that the rational soul is immaterial, immortal, and free from the psychosomatic emotions which belong to the mortal soul. While Plato stresses control of the appetitive part and sees it mostly as a burden, he thinks that the good habits of the spirited part may be helpful in refuting sensual suggestions and supporting rational action (*Republic* IV.440a–441a). Shame is one of these useful emotions (*Laws* I.647a–d, 649b–c, 699c–d). He also mentions the moderating effect of choral singing and dancing in Book II of the *Laws*.

Plato stresses that the unguided interests of the mortal soul have no positive role in the pursuit of the right end which is to become like God so far as one can (d). (See also *Theaetetus* 176b.) In the *Phaedrus* (246a–256e) Plato exceptionally regards the immortal soul as tripartite and describes it by the famous simile of the team of a worse and better horse (the appetitive and spirited parts) and a charioteer (reason). This passage suggests that erotic love between people can serve as a basis for affective love of the objects of the rational soul (e). The relationship between erotic love and a more elevated philosophical love of truth is also discussed in the *Symposium*. For love in *Phaedrus*, see Nussbaum 1986.

2 Aristotle’s Compositional Analysis of Emotion

a. Anger may be defined as a desire accompanied by pain, for a perceived revenge for a perceived slight on the part of people who have no call to slight oneself or one’s friends. (*Rhetoric* II.2, 1378a30–32)

b. Hence a physicist would define these differently from a dialectician; for example, the latter would define anger as the desire for returning pain for pain, or something like that, while the former would define it as a boiling of the blood or warm stuff around the heart. One of these explains the matter, and the other the form or account. (*De anima* I.1, 403a31–33)

c. Victory is pleasant, not merely to the competitive person but to everyone, for it produces an appearance of one’s superiority, and everybody has a keen appetite for that, more or less ... Honour and good repute are among the most pleasant things, because they produce the appearance of oneself as possessing the qualities of an excellent man ... A friend is also among pleasant things, for it is pleasant to love ... and to be loved, for here again an appearance that one is good is produced, a thing desired by all people who are aware of it. (*Rhetoric* I.11, 1370b32–1371a20)

d. Fear may be defined as a pain or disturbance arising from imagining some destructive or painful evil in the future ... we do not fear things which are very

remote, for example, we know that we shall die, but we are not troubled by it, because death is not near at hand. (*Rhetoric* II.5, 1282a21–27)

e. When we believe that something is fearful or threatening, an emotion is immediately evoked, and so too with what is encouraging. But when we merely imagine, we are like people who are looking at a painting of some dreadful or encouraging scene. (*De anima* III.3, 427b21–24)

f. Fear, confidence, appetite, anger, pity, and in general, pleasure and pain, may be experienced too much or too little, and in both ways not well; but to have these at the right time, on the right occasions, towards the right people, with the right aim, and in the right way, is what is both intermediate and best, and this is characteristic of virtue. (*Nicomachean Ethics* II.6, 1106b18–23)

g. One kind of incontinence is impetuosity, and another is weakness, for because of their emotion some people who have deliberated fail to stand by the conclusions of their deliberation, and others are led by their emotion because they have not deliberated. (*Nicomachean Ethics* VII.8, 1150b19–22)

Evaluation, feeling, and behavioral suggestion are the three kinds of constitutive elements which are often referred to in Aristotle's detailed discussion of emotions in the *Rhetoric* II.1–11 (**a**). Twelve emotions are described in these chapters: anger (*orgē*), feeling mildly (*praotēs*), friendly love (*philia*), hatred (*misos*), fear (*phobos*), confidence (*tharsos*), shame (*aiskhynē*), feeling kindly (*kharis*), pity (*eleos*), indignation (*nemesis*), envy (*phthonos*), emulation (*zēlos*). A partially overlapping list of emotions is found in *Nicomachean Ethics* II.5, 1105b21–23, where Aristotle suggests that emotions could be divided on the basis of whether they involve a pleasant or unpleasant feeling. This division was also used by later ancient thinkers, such as Aspasius and Alcinous (see p. 475 below). Aristotle thought, like Plato, that emotions are passive reactions of the emotional part of the soul the functions of which are always associated with bodily changes (**b**). He also assumed that there is an emotional part of the soul (cf. *Politics* I.5, 1254b8), but he preferred to speak about emotional powers instead of appetitive and spirited parts, as Plato did (*De anima* III.9–11). For desire in Plato and Aristotle, see Lorenz 2006.

In the first book of the *Rhetoric*, Aristotle analyses the content of some feelings by referring to a special awareness of oneself which is included in these (**c**). The cognitive part of emotion is treated as an evaluation which may be a non-deliberated evaluative judgement, or an evaluation which is not a judgement, but rather an act of imagination (**d–e**). Aristotle seems to think that when a judgement gives rise to an emotion in emotionally relevant situations, the corresponding evaluative representation does not necessarily do so. Emotions

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as spontaneous reactions of the emotional part have a great significance in human life. As distinct from Plato, Aristotle saw the goal of education in learning to feel correctly, rather than in decreasing and eliminating the role of emotions. Learning to feel well means that good emotional dispositions are formed in the soul – these are the virtues of the character which, together with the virtue of practical reason, contribute to good life (f). Following Plato, Aristotle explains akratic acts by referring to the distinction between non-deliberated emotional acts and the deliberated acts of practical reason (g). For akrasia, see also p. 541 below. For Aristotle's theory of emotions, see Nussbaum 1994; Cooper 1999; Fortenbaugh 2003; Konstan 2006; Knuutila 2006.

3 The Stoic Judgement Theory

a. Distress is an irrational contraction, or a fresh opinion that something bad is present, at which it is considered right to be contracted. Fear is an irrational avoidance, or escape from an expected danger. Desire is an irrational reaching out, or pursuit of an expected good. Pleasure is an irrational elation, or a fresh opinion that something good is present, at which it is considered right to be elated. (Pseudo-Andronicus, *On Emotions* 1.1 (223.12–19))

b. In the first book of his *On Emotions* Chrysippus tries to prove that emotions are judgements of reason, while Zeno held that they are not the judgements themselves but contractions, reachings, elations and avoidances of the soul which follow upon the judgements. Posidonius, disagreeing with both, praised and accepted the doctrine of Plato. He opposed the view of the followers of Chrysippus, arguing that emotions were neither judgements nor things which follow upon them, but certain motions of other non-rational powers, which Plato called appetitive and spirited. (Galen, *On the Doctrines of Hippocrates and Plato* V.1.4–6)

c. It is often asked whether it is better to have moderate emotions or none. We drive them out, whereas the Peripatetics temper them. I do not see how any moderate disease could be wholesome or useful. (Seneca, *Letter* 116.1)

d. For what can seem very great in human matters to a man who is acquainted with all of eternity and the greatness of the universe? And what in human aspirations or in the short span of our life can seem great to the wise whose soul is always on the watch to prevent anything to take place as unforeseen or as unexpected or as completely new. (Cicero, *Tusculan disputations* IV.37)

e. Sometimes if we have a sponge or a bit of wool in our hand, we raise it up and throw it, as if that would achieve something. If we happened to have a knife or

something else of the sort, we would use it in the same way ... Often in this kind of blindness we bite keys and thump against the door when it is not quickly opened, and if we stumble on stones we take our revenge on them, breaking them or throwing them somewhere. And all the while we say very odd things. (Galen, *On the Doctrines of Hippocrates and Plato* IV.6.44–45)

f. If you are fond of a ceramic vessel, say that it is a ceramic vessel of which you are fond; then you will not be disturbed if it breaks. If you kiss your child or wife, say that you are kissing a human being; then you will not be disturbed if they die. When you are going about an action, remind yourself what kind of action it is. If you are going to bathe, picture to yourself what happens at the baths: some people splash the water about, some push, some use abusive language, and others steal. You will undertake this endeavour more safely, if you say to yourself: 'I will now go to the baths, and keep my choice in harmony with nature'. (Epictetus, *Encheiridion* 3–4)

g. 'To what, then, ought I to direct my attention?' Well, first to those universal maxims which you must always have ready and not sleep, or arise, or drink, or eat, or converse with people without them: that no one is the master of another's choice; and that good and evil are in the choice alone. No one, therefore, has the power to cause me any good, or to involve me in any evil, but I alone have the power over myself with regard to these things. Since these, then, are secured to me, what need have I to be disturbed about external things? (Epictetus, *Dissertationes* IV.12.7)

h. Therefore that first agitation of the mind, which is excited by the appearance of injustice, is no more anger than is the appearance of injustice itself. It is the subsequent impulse which has not only received but also approved the appearance of injustice that is anger. (Seneca, *De ira* II.3.5)

i. The kinds of eupatheiai are three: wishing is well-reasoned reaching, joy is well-reasoned elation, caution is well-reasoned avoidance. (Pseudo-Andronicus, *On emotions* (235.19–23))

Abandoning the assumption of a separate emotional part or power of the soul, the Stoics argued that all human actions can be explained in terms of the operational principles of one rational soul. In agreement with this general attitude they regarded emotions as (mistaken) judgements. The Stoics divided emotions into four basic groups, depending on whether the object was evaluated as a present or future good or a present or future evil (**a**). (See also LS 65B.) This typology can be arranged as follows:

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		Time	
		<i>Present</i>	<i>Future</i>
Value	<i>Good</i>	Pleasure	Desire
	<i>Evil</i>	Distress	Fear

A great number of various specific emotions were classified under the four basic types (Pseudo-Andronicus, *On emotions (Peri pathōn)* 1.1–5; see also Diogenes Laertius VII.110–14; Stobaeus, *Anthologium* II.88.16–21; 90.7–92.17; Cicero, *Tusculan Disputations* IV.11–22). The fully developed definitions of emotion types involve a description of an affective psychosomatic movement (contraction, elation, reaching out, avoidance), a value judgement about an object, as well as a practical judgement that it is proper to react to the object with affective movements and behavioural reactions. (For two judgements as the basic elements of emotion, see also Stobaeus II.90.11, 14–16; Cicero, *Tusculan Disputations* III.61, 68, 74, 76, IV.14, 59, 61; Seneca, *De ira* II.4.1.) According to the Stoics, the universe is guided by divine reason in which all human beings in principle participate. This is not understood by the majority of people who are alienated from their real nature. Evaluating things from their subjective self-regarding perspective, they end with wrong judgements (Diogenes Laertius VII.87–8, Seneca, *Letter* 92.30). Emotions are ‘irrational’, ‘contrary to nature’ and ‘excessive’. For the Stoic theory of emotions in general, see Brennan 2005; Graver 2007. The central elements of the Stoic theory of emotions were formulated by Chrysippus, whose lost works are often quoted by later ancient writers, particularly in Galen’s *On the Doctrines of Hippocrates and Plato*. Galen reports of Posidonius’s view that the Platonic irrational capacities are also relevant and their movements are involved in emotions (**b**). Since Posidonius was regarded as a representative of Stoic philosophy, it is possible that Galen exaggerated his deviation from Chrysippus. (See Sorabji 1998; Cooper 1999, 449–484.)

The freedom from emotions (*apatheia*) is the goal of Stoic therapy (*therapeia*) (**c**). Emotions are treated as symptoms of a disease of the soul, caused by improperly functioning reason (Cicero, *Tusculan disputations* IV.23). The therapy is cognitive and argumentative since emotions are false judgements and can therefore be learned away. The core of the therapy involves accepting a philosophical worldview and the correct mode of evaluating things, which excludes emotional judgements (**d**). The initial effects of philosophical conversion were supported by pragmatic therapeutic tools. Rhetorical vituperation of emotions was meant to remind one of the madness of emotional behavior; a Chrysippian example of this is quoted by Galen, who himself heavily criticised the Stoic theory (**e**); see also Seneca, *De ira* I.1.3–5. Other means of practical therapy included training to anticipate things by pre-meditation and

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to deconstruct emotionally laden appearances (**f**; see also Epictetus, *Dissertationes* III.24.88), as well as the continuous introspective supervision of one's thoughts and acts (*prosokhē*) and evaluation of one's moral development (**g**). See also Epictetus, *Dissertationes* II.18.12–18; IV.12.7–9, 15–18; III.12.7–12; Seneca, *De ira* III.36; Marcus Aurelius III.13. For more about the therapy, see Irene Hadot 1969; Nussbaum 1994; Sorabji 2000; Graver 2007. The Stoics developed the theory of pre-emotions (*propathēia*) or first movements (*primus motus*) as an answer to the criticism that *apatheia* seems to be impossible, for even Stoics may seemingly react emotionally (**4b** below). Seneca explains that persons might react quasi-emotionally in exceptional circumstances, but this is not really an emotion if no judgemental assent is involved (**h**). As for the criticism of insensitivity or inhumanity, the Stoics referred to 'good emotions' (*eupatheiai*) which, to be sure, are not really normal emotions, but serene feeling moods of the Stoic wise in accordance with right values (**i**). For pre-emotions, see Sorabji 2000; Knuuttila 2006; Graver 2007; for *eupatheiai*, see Brennan 1998, 2005.

4 Other Ancient Discussions

a. An emotion is an irrational movement of the soul in relation to bad or good things. The movement is called irrational because emotions are neither judgements nor opinions, but rather movements of the irrational parts of the soul, for they occur in the affective part of the soul ... They take place in relation to bad or good things because the appearance of an indifferent thing does not arouse an emotion; all emotions arise as a result of the appearance of something good or something bad. For if we assume that something good is present to us, we feel pleasure, and if we assume that it might be present, we feel desire; while if we assume that something bad is present, we feel distress, and if we assume that it might be present, we feel fear. There are just two simple and elemental emotions, pleasure and distress, the others being compounds of these. (Alcinous, *Didaskalikos* 32.1–2)

b. [Reason] ... does not wish to do away with emotions completely, for this is neither possible nor useful, but places some limit and order upon them as well as ethical virtues, which are not free from emotions but bring proportion and measure to them. (Plutarch, *De virtute morali* 443c)

c. For I do not agree with those who praise that harsh and severe freedom from emotions, which is neither possible nor useful, for this will rob us of the kindly feeling which derives from mutual love and which above all else we must preserve. But to be carried beyond bounds and to assist in increasing grief is contrary

to nature ... but a moderate emotion is not to be rejected. (Plutarch, *Consolatio ad Apollonium* 102c–d)

d. We must compare them with their former occurrences to see whether the appetites and fears and angers are now less intense than earlier, so that we, by means of reason, might get quickly rid of the cause which kindles and inflames them. And we must compare them with one another, to see whether we now feel more shame than fear or more emulation than envy ... For just as the movement of a disease to the less dominant parts of the body is not a bad sign, one may assume that when the vice of those who are making progress is changed into more moderate emotions, it is being gradually abated. (Plutarch, *Quomodo quis suos in virtute sentiat profectus* (*How to recognise one's moral progress*) 83e–84a)

e. She knew what an impious and terrible thing she was performing when she set out to kill her children, and therefore she hesitated ... Then anger dragged her again by force to the children, like a disobedient horse which has got the better of the charioteer; then reason again pulled her back and led her away, then anger again caused an opposite pull, and then again reason. (Galen, *On the Doctrines of Hippocrates and Plato*, III.3.14–16)

f. What are the disturbing emotions? ... fears of the gods, of death and of [pain], and, in addition, desires which [exceed] the natural bounds. These are the roots of all evils; and [unless] we cut them off, [a great number] of evils will grow. (Diogenes of Oenoanda, fr. 34, ed. Smith)

g. No one would believe Epicurus when he said that, while dying with the greatest pain and disease he was cheered on his way to death by the memory of the pleasures he had enjoyed before. (Plutarch, *Non posse suaviter vivi secundum Epicurum* (*That Epicurus makes a pleasant life impossible*) 1099d–e)

h. The mind also has that heat which it takes on when it boils with anger and the fire flashes from the eyes; there is also plenty of cold breath, the companion of fear, which produces fright in the limbs and stirs the body; and there is also that state of still air which is found in a tranquil breast and a calm face. (Lucretius, *De rerum natura* III.288–293)

i. So the higher justice in the soul is its activity towards intellect, its temperance is inward turning to intellect, its courage is freedom from emotions, by assimilation to that towards which it looks, which is free from emotions by nature. (Plotinus, *Enneads* I.2.6, 23–26)

j. The species of distress are four: grief, anguish, envy, and pity. Grief is a distress which makes one speechless; anguish is one which oppresses; envy is one provoked by the goods of the others; pity is one provoked by the evils of others ... Fear is divided into six species: shrinking, modesty, shame, terror, consternation, and anguish. Shrinking is fear of taking action; terror is fear arising from a strong impression; consternation is fear arising from an unusual impression; anguish is a fear of failure and misfortune, for we feel it when we fear that we will be unsuccessful; modesty is a fear

due to an expected reproach – this is a good emotion; shame is fear due to evil done ... The species of angry emotion are three: wrath (which is also called bile and choler), grievance, and vindictiveness. Anger which begins and changes is called wrath and also bile or anger, grievance is inveterate bile, for it is called so because it lasts and is stored in the memory, and vindictiveness is anger on the watch for an opportunity for revenge. (Nemesius of Emesa, *De natura hominis* 19–21)

In his second-century handbook of Platonism, Alcinous stresses that emotions are not simply judgements; they are motions of the soul, and as such are also influenced by the inclinations of the emotional part of the soul itself. This was the dominant Platonist view. Apart the two basic emotions of pleasure and distress, other emotions involve mixed feeling qualities (pleasure, distress) and can be classified as pleasant or unpleasant on the basis of the nature of the dominant part (a). For this classification principle, see also Aspasius's commentary on the *Nicomachean Ethics* (41.28–43.32) and Stobaeus, *Anthologium* II.142.20–22. Criticising the Stoic view, Alcinous remarks that if our reason does not regard an object as good or bad, we do not hold such a judgement, but in spite of this we may be driven by objects which make such an impression (32.1). For the view that emotional evaluative representations are not necessarily judgements, see also Aspasius, 44.33–45.16. In addition to arguing that emotions belong to the natural constitution of human beings, Platonic authors criticised the Stoic *apatheia* as inhuman and preferred the therapy which aimed at moderate emotions, *metriopatheia* (b-c). See also Alcinous, *Didaskalikos* 30.5; Philo of Alexandria, *Questions and Answers to Genesis* IV.73, Augustine, *De civitate Dei* XIV.9. Plutarch emphasises the introspective awareness of emotional habits and their development as part of improving one's soul (d). These ideas were important in Stoic therapy as well and often repeated in therapeutic and exhortative treatises. Galen deals with these practical pieces of advice in his *De proprium animi cuiuslibet affectuum dignotione et curatione* (*On the diagnosis and therapy of the distinctive passions of the individual's soul*), but he also suggests medications, diets and gymnastics in his medical therapy of excessive emotions. (See Sorabji 2000, 253–260.) Galen's treatise *On the Doctrines of Hippocrates and Plato* contains a detailed criticism of the Stoic theory of emotions. He is particularly critical of Chrysippus's monistic psychology. As for Chrysippus's comments on emotions in Euripides's *Medea*, Galen argues that he did not realise that Medea's inner conflict is intelligible only on the assumption that there is an emotional part of the soul which can act against the voice of reason (e). See Gill 1998.

In his hedonist writings Epicurus advised his followers to give up false beliefs concerning pleasures, the soul, and the gods which resulted in mental upset and unpleasant emotions. The key doctrines were summarised in

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concise formulations (f). (For translating this fragmentary inscription, see Smith 1993.) Epicurus stressed the therapeutic goal of his philosophy: ‘The words of a philosopher who offers no therapy for human suffering are empty. For just as medicine is useless if it does not give therapy for bodily diseases, so philosophy is useless if it does not expel the suffering of the soul’ (quoted by Porphyry in his *Ad Marcellam* 31; cf. LS 25C). In curing sadness, the Epicurean remedy was to call the mind away from painful thoughts to pleasant thoughts remembered from the past (g; see also Cicero, *Tusculan Disputations* III.33, III.76, V.74). Like all ancient philosophers, the Epicureans assumed that emotions have a cognitive element. The analysis of emotions from the point of view of atomist physics remained sketchy (h). In his Neoplatonic philosophy, Plotinus also argued for *apatheia*, though this did not involve the disappearance of the emotional part – earthly emotions became useless in the higher Neoplatonic form of life (i). For emotions and their therapy in Middle Platonist and Neoplatonic philosophy, see Nussbaum 1994; Hadot 1987; Emilsson 1998; Sorabji 2000. Epicurean therapy is discussed in Nussbaum 1994 and Procopé 1998, and emotions in the sceptics in Bett 1998. Some ancient discussions were summarised by Nemesius of Emesa (c. 400). Nemesius’s descriptions of various emotions mostly derived from Stoic sources (j). ‘Grievance’ is a translation of *mēnis* which was traditionally explained by referring to *menein* (stay). Before the chapters on distress, anger and fear, Nemesius deals with pleasure in Chapter 18. See also the notes in the translation by Sharples and van der Eijk. Nemesius’s discussions of emotions were paraphrased by John Damascene in his *De fide orthodoxa*, without mentioning the source. Both works were known as Latin translations in early medieval times; see 7 below. For emotions in ancient Rome, see Kaster 2005.

5 Christian Applications

a. What need is there now of courage or of desire for this man who has attained affinity with the impassible God which arises from love and who and has been enrolled among friends by love? For us, the perfect gnostic must be removed from any passion of the soul. For gnosis achieves exercise, exercise then brings about habit or becoming accustomed, and this calming ends in *apatheia*, not in *metriopatheia*. (Clement of Alexandria, *Stromateis* VI.9.73–74)

b. All those are sinners who become angry, who feel sadness about mundane things, who fear suffering or death, who desire things they do not have, and who irrationally bind their soul to allegedly good things which are not good. (Origen, *Commentary on Matthew* XV.16 (396.25–397.1))

c. Apatheia should keep the heart untroubled, and we are led to this by the right community and true doctrines. (Origen, *Selecta in Psalmos*, PG 12 (1600c))

d. And the soul is moved by heavenly love and desire when it, having perceived the beauty and fairness of the Word of God, falls in love with His form and receives from the Word a certain dart and wound of love. (Origen, *Commentary on the Song of Songs*, Prologue (67.7–9))

e. Love, then, striving to have what is loved, is appetite, and having and enjoying it, is joy; and love fleeing what is opposed to it is fear, and experiencing this when it happens is distress. These are evil if the love is evil and good if it is good. (Augustine, *De civitate Dei* XIV.7)

f. This explains why the philosophers, who approached the truth more nearly than others, acknowledged that anger and lust are vicious parts of the soul, on the ground that they move in a disturbing and disorderly way, inciting us to acts which wisdom forbids, thus needing to be moderated by mind and reason. (Augustine, *De civitate Dei* XIV.19)

g. But if someone maintains that what comes from outside cannot be resisted when it has happened, let him turn his attention to his own passions and movements and see whether there is not an approval, assent, and inclination of the governing faculty to that thing on account of these incentives ... Another man in the same circumstances, with more knowledge and practice, also encounters titillations and incitements, but his reason, as being better strengthened and trained and confirmed by doctrine towards the good, or being near to confirmation, repels the incitement and weakens the appetite. (Origen, *De principiis* III.1.4 (198–199))

h. When the mind enjoys forbidden things merely in cogitation and, having not yet decided to realise them, holds onto them and adheres with a pleasure to what should have been expelled as soon as it touched the mind, one cannot reasonably maintain that this is not a sin, though far less than if it were also determined to accomplish it. (Augustine, *De trinitate* XII.12.18)

i. Sometimes a movement of the sensual part towards forbidden things, e.g. anger or fornication, arises without a thought or decision to realise or not to realise it, and this is always a sin, though a venial one. Some people draw a distinction here. They say that some of these movements are primary first movements, namely those to which we do not offer any opportunity and which occur involuntarily, and they think that these are not sinful. Movements to which we offer an opportunity are secondary first movements, for example when someone goes to a party for recreation and something seen there gives rise to a first movement without cogitation, and these are venial sins. We call both venial sins, but the latter ones are more serious ... It may happen that somebody cogitates upon a movement towards forbidden things and upon the pleasure associated with them without deciding to realise them even if there were an opportunity; if this cogitation is of short duration only, it is a venial sin; but if it lasts for a longer time and is not repressed, it is in a sense consented to, even though there is no decision to realise it. (Peter of Capua in O. Lottin, *Psychologie et morale aux XIIe et XIIIe siècles*, vol. II (499))

While Clement of Alexandria and Origen made use of the Platonic notion of the soul and the doctrine of metriopatheia, they also applied the Stoic doctrine of apatheia in accounting for an emotional alienation from earthly values. Freedom from emotions prepared the soul to receive divine love (*agape*) and for divinization which was described with influential emotional allegories by Origen (a–d). The mystical experiences were not regarded as emotions because they were caused by the divine presence which was sensed by special spiritual senses activated by grace. While the Origenist ideas influenced Monastic traditions, particularly through the works of Evagrius of Pontus, John Cassian and John Climacus, the Platonic metriopathetic tradition became more common among early Christian writers. See Knuuttila 2006, 111–151. Augustine, who preferred the Platonic psychology of emotions, systematised the four basic emotions as forms of love (e). Because of his broad notion of the will as a moving power, Augustine also calls the emotions volitions (*De civitate Dei* XIV.6), but these lower volitions of the emotional part can be controlled by the higher rational will. The rational will should master emotions which, because of original sin, tend to function against right conduct (f). However, in his criticism of the Stoic theory, Augustine argues that emotions may have positive social and moral functions in human life (*De civitate Dei* IX.5; XIV.9). Origen used the Stoic doctrine of pre-emotion in discussing sin (g). This analysis was used by his followers and continued by Augustine, who taught that the fallen human soul is very keen to produce evil thoughts which should be repelled as soon as possible (h). The occurrence of an evil thought is called suggestion, the initial emotional attention is called pleasure, and the acceptance is called consent. See e.g., *De sermone Domini in monte* 12.34: ‘For there are three things which go to complete sin: suggestion, taking pleasure, and consent’. According to Augustine, ‘we do not sin in having an evil desire, but in consenting to it’ (*Expositio quarundam propositionum ex Epistola ad Romanos*, PL 35, 2066), but he thought that if the pleasure of cogitation of a sinful thing is not destroyed as soon as possible, a person can be said to consent to this pleasure. This led to detailed discussions of the intention and degrees of sins which continued through medieval times. While Augustine seems to think that the ‘first movement’ in itself is not counted as a sin if it is immediately repelled, there were various disagreements about this later on, as is shown by Peter of Capua’s late twelfth century distinctions (i). The most usual traditional advice for expelling sinful thoughts was to imagine something else – the mind cannot simultaneously attend to two different representations of sensible things (Evagrius of Pontus, *On thoughts* 24). See Knuuttila 2006, 152–172; for Augustine’s view of emotions, see also Brachtendorf 1997.

6 Influential Arabic Conceptions

a. Anger is rushing out of the blood from the heart and a quick movement of natural heat at the same time throughout the body, preparing one for revenging insults ... Joy is a movement of natural heat into the extremes of the body and its slow diffusion ... Distress is a slow movement of the natural heat into the inner part of the body ... Fear is a movement of natural heat into the inner part of the body. (Haly Abbas, *Liber totius medicine necessaria continens*, trans. Stephen of Antioch, V.38 (69a–b))

b. In anger the heat and the spirit quickly and impetuously move out and they do not wholly leave this radix; they first move into it and then out. In joy the natural heat and the spirit slowly move out, and sometimes the radix, that is, the heart, is left without them ... In fear, the heat and the spirit quickly move in, and in distress they move slowly. (Maino de Maineri, *Regimen sanitatis* III.8)

c. There are two modes of action of the motive power, for it may move either by commanding a movement or by causing movement to take place. As far as it commands a movement, it is an appetitive and desiderative power which commands other moving powers to move when the imagination, of which we shall speak later, imagines a desirable or repugnant form. It is divided into two parts. One is called the concupiscible power, and this commands the movements which bring one near to things which are regarded as necessary or useful for a pleasurable appetite. The second is called the irascible, and this commands the movements which repel things which are regarded as harmful or destructive for the desire for overcoming things. But in so far as the motive power causes a movement, it is distributed through the nerves and muscles and contracts the tendons and ligaments which are connected to the organs towards the starting point of the movement or, in an opposite way, it relaxes and stretches the tendons and ligaments away from the starting point. (Avicenna, *Liber de anima seu sextus de naturalibus* I.5 (82.42–83.55))

d. Fear, pain, and distress belong to the accidents of the irascible power through the communion of the apprehensive powers, for when they are moved as a consequence of an intelligible or imaginable form, there will be fear, and when it does not feel fear, it is strengthened and there will be pain, and there will be anger when it cannot repel this or the fear that it will happen. Joy which is separate from this is the end of this power. Greed of money, hunger, sexual desire and other similar things are acts of the concupiscible animal power. Relief and joy are accidents of apprehensive powers. Human powers have some dispositions which belong properly to them; we shall speak about these later. The desiderative power follows these aforementioned powers, for it has a desire when its power is strengthened, but all these follow the estimative powers. (Avicenna, *Liber de anima seu sextus de naturalibus* IV.4 (58.26–59.39))

e. Then there is the power of estimation, which is located at the top of the middle ventricle of the brain, apprehending the unsensed intentions which are in individual

sensed objects. This is the power with which the sheep judges that the wolf is to be avoided and the lamb is to be loved. (Avicenna, *Liber de anima seu sextus de naturalibus* 1.5 (89.48–52))

f. Therefore it is true to say: ‘We desired it because we perceived it’ or ‘We are angry because we saw that’. That in which these powers are united is the power by which one’s essence is known to everyone, so that it is true to say: ‘We desired it because we perceived it’. (Avicenna, *Liber de anima seu sextus de naturalibus* V.7 (159.14–18))

g. It is a properly human thing that the apprehension of something very unusual is followed by the emotion which is called wonder, and this is followed by laughter, and the apprehension of a noxious thing is followed by the emotion which is called grief, and this is followed by weeping. (Avicenna, *Liber de anima seu sextus de naturalibus* V.1 (73.61–74.64))

On the basis of Galen’s medical theory of the humours and vital spirits, Alī ibn al-‘Abbās al-Mağūsī (Haly Abbas) summarises the physical aspects of basic emotions as slow or quick movements of the natural heat and vital spirits in blood towards the heart or away from it – the passage is translated slightly differently in the eleventh-century Latin translation by Constantine the African (*Pantegni*) and in the translation of Stephen of Antioch from 1127 (a). This led to a popular medical classification of emotions on the basis of these movements which is found, for example, in Maino de Maineri’s oft-printed late fourteenth-century *Regimen sanitatis* (b):

		Direction	
		<i>Centrifugal</i>	<i>Centripetal</i>
Intensity	<i>Slow</i>	Joy	Sadness
	<i>Quick</i>	Anger	Fear

Emotions were not reduced to physical movements in medical treatises: ‘There are two causes of these accidents of the soul. One of these is the non-corporeal apprehensive power, for there is fear when the soul apprehends something fearful, there is anger when it apprehends something irritating, and so on. The second cause is corporeal, the natural heat or spirit’; Taddeus Alderotti (d. 1295), *Expositiones in arduum Aphorismorum Ipcratis* (381v). The physiological model of the movements of spirits and heat was popular in discussions of emotions until the seventeenth century. See also Gil-Sotres 1994 and 11a–b below.

Avicenna’s analysis of emotions as acts of the sensory moving power was another influential Arabic contribution. Avicenna divides the faculties of the

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sensory soul into apprehensive powers and moving powers. For Avicenna's faculty psychology, see Black 2000. The moving powers are divided into commanding moving powers and executive moving powers. The acts of the sensory commanding moving power are triggered by occurrent evaluations and accompanied by physiological affections as well as behavioural changes, provided that the executive moving power is also actualized (c) – this does not take place necessarily in human beings, i.e. they may control their emotional behaviour. The cognitive activator is sometimes said to be the imagination, as in (c), but more usually it is said to be the estimative power, which grasps the 'intentions' (i.e., the useful or harmful aspects of objects) (d); for the estimative source of emotions, see also *Liber de anima* IV.3 (44.22–23) and pp. 142–145 above. The moving power of the intellectual soul is the will, which together with practical intellect should control the sensory acts (*Liber de anima* I.5 (94.8–14)). Evaluation, motivation, and physiological changes are traditional compositional elements of emotions which are also involved in Avicenna's theory of emotions as sensory motive acts. Avicenna makes some remarks about the feeling aspect as well. He classifies pleasure and joy as acts of apprehensive power (e) – these are apparently pleasant modes of apprehending things. Avicenna says elsewhere that pleasure is an apprehension of agreeable as agreeable (*Liber de philosophia prima*, VIII.7 (432.67–68)). Somewhat strangely, he classifies pain and distress, the contraries of pleasure and joy, as irascible acts. He apparently thought that, as distinct from pleasure and joy, pain and distress can be treated as motive acts. It remains less clear whether all motive acts are associated with a feeling. Avicenna thinks that, since the structure of emotions consists of acts of separate faculties, a unified awareness of the soul is required for them to form a whole (f). See also p. 441 above. According to Avicenna, there are special human emotions which presuppose a more conceptual orientation to things than what is typical for animals (g). These include fear and hope with respect to things which are not yet actualized, shame at wrong action, and wonder at unusual things, which is expressed in laughter. It is also human to express anxiety by weeping; *Liber de anima* 1 (69.5–76.3).

7 Early Medieval Taxonomical Discussions

a. In governing the material life the soul uses four powers which are located in singular organs: the appetitive, the retentive, the digestive, and the expulsive; and similarly, in governing the rational life, it uses four passions: hope, joy, fear, and distress. And as the whole nature of the corporeal life takes place through three powers (the natural in the liver, the spiritual in the heart, and the animal in the brain), so the spiritual and rational practices extend to three powers: the reasoning,

the concupiscible, and the irascible. (William of Saint Thierry, *De natura corporis et animae* II.88–89)

b. Affect is fourfold: as for things which we love, we either enjoy them as present or hope for them as future, while with respect to things which we hate we already have distress about them or else are in fear of having it. And so joy and hope arise from the concupiscible power, while distress and fear arise from the irascible power. (Isaac of Stella, *Letter on the Soul*, PL 194 (1878d))

c. There are seven principal emotions which rise in turns from one affective power of the soul: hope and fear, joy and distress, hatred, love and shame. Each of these can be ordinate or inordinate. (Richard of Saint Victor, *The Twelve Patriarchs* 7)

d. If you are caught in sin and confounded with shame when you are caught, I do not believe that you are ashamed of the fault, but of the infamy. For such shame descends not so much from the sin itself as from the damage to the reputation ... The person who judges and the person who is judged are the same, as is he who condemns and he who is condemned and he who punishes and he who is punished. (Richard of Saint Victor, *The Twelve Patriarchs* 46, 48)

e. The motive powers are divided into appetitive and aggressive ones. While the appetitive power seeks the good and avoids harm, the aggressive power, which is properly called the irascible, is directed to great and arduous things. (Anonymous, *De potentiis animae et obiectis* (159))

f. Love is a pleasure of the heart which is directed to an object because of that object. It is desire in appetite and joy in fruition, running there with desire and resting there with joy. (Hugh of St. Victor, *De substantia dilectionis* (86))

g. John Damascene says that ‘a passion is a movement of the appetitive sensible power caused by the imagination of something good or evil’ and, differently, that ‘a passion is a movement of the irrational soul caused by an assumption about good or evil’ and, differently, that ‘a passion is a movement from something to something’ ... One has to say that a passion is not, in truth, a movement, although it does not occur without a movement. The Damascene mistakenly equates what is left from a movement with the movement, for a moving thing is a subject of passion through a movement. (Albert the Great, *De bono* V (195.11–6, 197.5–9))

h. There are two dispositions in the concupiscible moving power: liking and dislike, for some acts are actualized in accordance with liking and others in accordance with dislike ... Concupiscence is the simple appetite and desire an intensive appetite of the good. Liking the presence of what is pleasant to oneself generates joy or delight – joy when it is received and delight when enjoyed or used. Liking what is good to another generates love ... liking what is evil is only possible with respect to what is evil to another, not to oneself ... this generates hatred. Dislike may be of good or evil, and that of good may be of good to oneself or another. Dislike of what is good to oneself generates distaste or aversion ... that of what is good to another generates envy. If it is of evil, it may be of evil to oneself or another. That of evil to oneself

generates pain or distress, and that of evil to another generates pity ... The acts of the irascible, which are directed toward arduous and difficult objects, take place in accordance with two dispositions, strength and weakness ... Irascible acts in accordance with strength are towards good or against evil, not toward any good but toward what is associated with acts of excellence and honour ... Among these are ambition, hope, pride, lust for power, and contempt ... The acts against evil in accordance with strength are courage, anger and rising against evil ... The acts in accordance with weakness are poverty of spirit ... despair, humility, reverence, and impatience. (John of la Rochelle, *Summa de anima* II.107 (257–258))

The Stoic fourfold classification of emotions and the Platonic division between concupiscible and irascible powers were often used, as is exemplified by the twelfth-century treatises of William of Saint-Thierry and Isaac of Stella (a–b). Both schemes were known through Augustine and other ancient sources, such as the chapters on emotions in Nemesius of Emesa's *De natura hominis* (chapters 16–21) or the paraphrase of these in John Damascene's *De fide orthodoxa*; both works were translated into Latin by Burgundio of Pisa in the middle of the twelfth century; Nemesius's work was first translated by Alfano of Salerno c. 1080. The Stoic division was put in verse in Boethius's influential *Consolatio philosophiae* (I.7.25–28). John Damascene's views are summarised, for example, in John of la Rochelle's *Summa de anima* II.74–78 (217–212); Albert the Great explains the views of Nemesius of Emesa, whom he calls Gregory of Nyssa, and John Damascene in *De bono* III.5.2. Richard of Saint Victor adds the emotions of hatred, love and shame to the Stoic classification (c). Hatred or anger was often mentioned separately in this context; in the original Stoic division, it is a subspecies of desire, but it was not usual to include shame in the list of basic emotions as Richard does. In discussing shame, he refers to the classical view that shame as an emotion is felt because of social disgrace. He argues that true spiritual shame is accompanied by an act of conscience by which sinful acts or thoughts as such are condemned as shameful. While the mundane emotion of shame is audience-oriented, the true shame is internalised in the sense that the audience is reduced to the person him- or herself (d).

Isaac of Stella combines the Stoic and Platonic division by locating emotions with present or expected pleasure in the concupiscible part and those with present or feared distress in the irascible part. This division was found in Avicenna and also in some ancient Christian authors. Isaac of Stella's formulation was quoted in the influential anonymous twelfth-century *Liber de spiritu et anima* (PL 40 (782, 814)); this treatise was regarded as a work by

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Augustine until the time of Aquinas, who did not believe it. One problem with this approach was that it did not match Aristotle’s view that the emotional powers had contrary acts. This was noticed, for example, in John Blund’s early thirteenth-century discussion of Avicenna’s view (*Tractatus de anima* 18.22–22.16). An influential new idea was introduced to solve this taxonomical problem in the 1230s; the objects of the contrary concupiscible acts were simply pleasurable or painful, and the objects of the irascible acts were, in addition, arduous – difficult to obtain or to avoid (e).

Hugh of St. Victor defines love as a pleasant awareness of an object which, when striving for the object, is called desire, and when enjoying it, is called joy (f). This mode of describing positive concupiscible emotions as various stages of movement was another popular idea in early thirteenth century. Albert the Great argued, referring to Aristotle’s *Categories* 8, that even though emotions are traditionally called movements of the soul, they should be regarded as qualitative states of the moving power (g). In John of la Rochelle’s taxonomy (c. 1240), the concupiscible pairs of motive acts are associated with contrary dispositions of liking (*placencia*) or dislike (*displacencia*), and the irascible acts with strength (*corroboratio*) and weakness (*debilitas*) (h). The dispositions refer to emotional reacting capacities – they are not analysed in detail. The concupiscible emotions are classified as follows:

	Self-regarding reactions				Other-regarding reactions	
	<i>First orientation</i>	<i>Action initiation</i>	<i>Acts towards results</i>	<i>Acts towards durable results</i>	<i>Desiring good or evil to others</i>	<i>Distress about results</i>
<i>Liking</i>	Appetite	Desire	Joy	Delight	Love Hatred	
<i>Dislike</i>	Distaste	Aversion	Pain	Distress		Envy pity

As for the irascible emotions, John of Rupella explains that ambition and hope pertain to future honour and prosperity, hope involving the belief that they will be achieved. The opposites are poverty of spirit and despair. Three emotions are associated with attempts to strengthen one’s social status: pride, lust for power, and contempt. The opposite of pride and lust of power is humility, and the opposite of contempt is reverence. Of the acts directed towards evil things, courage is a desire to meet the enemy with confidence, anger is a desire for revenge, and magnanimity is rising up against evil. Three opposites of courage are forms of the flight from evil: penitence toward past evil things, impatience with present evil things, and fear of future evil things.

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<i>Strength</i>	Ambition	Hope	Pride	Lust for power	Contempt	Courage	Anger	Magnanimity
<i>Weakness</i>	Poverty of spirit	Despair	Humility		Reverence	Fear Penitence Impatience		

See John of la Rochelle, *Summa de anima*, 256–262. This was the most detailed thirteenth-century taxonomy which probably influenced Aquinas’s classification. For early medieval theories, see Knuuttila 2006, 212–239.

8 Thomas Aquinas

a. Emotion is a kind of movement, as stated in *Physics* III. Therefore the contrariety of emotions should be treated as a contrariety of movements or changes. Now, there is a twofold contrariety of changes and movements, as stated in *Physics* V. One is according to approach to or withdrawal from the same terminus, and this contrariety applies properly to changes, that is, to generation, which is a change to being, and to corruption, which is a change from being. The other contrariety is according to the contrariety of the termini, and this applies properly to movements, for example whitening, which is a movement from black to white, is opposed to blackening, which is a movement from white to black.

Therefore, there are two kinds of contraries in the emotions – one is according to the contrariety of objects, that is, of good or evil, and the other is according to approach to or withdrawal from the same terminus. In concupiscible emotions there is only the former contrariety, whereas both forms are found in irascible emotions. The reason for this is that the object of the irascible power is the sensible good or evil, not as such but as arduous. The good which is arduous or difficult is such that one may tend to it qua good, as in hope, or one may turn from it qua arduous and difficult, as in despair. Similarly the evil which is arduous is such that one may avoid it qua evil, as in fear, or one may tend to it as arduous in order to avoid something evil, as in courage. Therefore the irascible emotions may be contraries according to the contrariety between good and evil, as hope and fear, or according to approach and withdrawal, as courage and fear. (Thomas Aquinas, *Summa theologiae* II-1.23.2)

b. Accordingly there are three pairs of emotions in the concupiscible power: love and hatred, desire and avoidance, and joy and distress; similarly there are three groups in the irascible power: hope and despair, courage and fear, and anger which has no contrary emotion. Consequently there are eleven different types of emotions

in which all emotions are contained, six in the concupiscible power and five in the irascible part. (*Summa theologiae* II-1.23.4)

c. It is clear that everything which tends to an end first has an aptitude or proportion to the goal, for nothing tends to a disproportionate end; second, it moves towards the goal; third, it comes to rest in the end once it has been attained. The aptitude or proportion of the appetite to a good thing is love, for love is precisely the liking of some good; the movement towards the good is desire or concupiscence; and resting in it is joy or pleasure. (*Summa theologiae* II-1.25.2)

d. Thus the pleasurable, by attuning the appetite to itself in a way and making it conform, causes love; by attracting it to itself when absent, causes desire; and by bringing it to rest in it when present, causes pleasure. Desire therefore constitutes a species of emotion distinct from love and from pleasure. (*Summa theologiae* II-1.30.2)

e. In the passions of the soul, the movement of the appetitive potency itself is like the formal element, and the bodily transmutation is like a material element, where one is proportional to the other; accordingly, the appetitive movement is accompanied by a bodily change which resembles it and conforms to its nature. (*Summa theologiae* II-1.44.1)

f. In the first sense of the term ‘natural,’ some passions are sometimes said to be natural, such as love, desire, and hope, but others cannot be so designated, because love and hatred as well as desire and aversion involve an inclination to pursue the agreeable and avoid the disagreeable, and this sort of inclination is also found in a natural appetite. Thus there is a natural love, and we may even speak of desire and hope in natural things lacking cognitive power. But the other passions involve movements for which a natural inclination is altogether inadequate. First, these passions may of their very nature entail perception or cognition. We have seen that pleasure and pain naturally require apprehension. If it be lacking, neither pleasure nor pain can be experienced. Second, reactions of this kind may be contrary to a natural inclination. (*Summa theologiae* II-1.41.3)

g. The Philosopher says in *Ethics* IV that ‘shame is not had by a morally good person ... Yet, they are so disposed that, were there something disgraceful in their lives, they would be ashamed. Hence the Philosopher says in *Ethics* IV that ‘shame belongs conditionally to the morally good person. (*Summa theologiae* II-2.144.4)

Like his contemporaries, Aquinas regards emotions as the acts of the sensitive moving faculty which is a passive power divided into the passive concupiscible and irascible parts and triggered into activity by various evaluative cognitions (*Summa theologiae* I.81.2–3). Aquinas’s taxonomy of emotions is similar to that of John of la Rochelle, but their classification principles are

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different. Aquinas thought that the doctrine of contrary movements and changes, found in Aristotle's *Physics* (V.5), can be applied to emotions as movements of the soul. The contrary movements of the concupiscible power are directed towards contrary ends (sense-good and sense-evil), and the contrary movements of the irascible power with respect to arduous objects are approaches toward and withdrawals from the same object (**a**). There are eleven types of emotions: three pairs of contrary concupiscible emotions (love-hatred, desire-avoidance, pleasure-distress) and two pairs of contrary irascible emotions (hope-despair, courage-fear); anger has no opposite (**b**). Aquinas describes the differences between concupiscible emotions by referring to the traditional model of various behavioural stages directed to sense-good and sense-evil (**c**); love, desire and pleasure correspond to the incipient movement, actual movement, and rest with respect to an object; cf. **7c** above. Emotional movements are caused by objects when the estimative or cogitative power regards them as good or evil (**d**); for the role of estimation, see *Summa theologiae* I.78.4. The changes of concupiscible and irascible motive powers are also associated with physiological changes; emotions are essentially psychosomatic (**e**). (See also *Summa theologiae* II-1.37.4.)

Aquinas's attempt to deal with emotions from the point of view of Aristotle's doctrine of movement was not without problems. In some places he seems to treat emotions as behavioural changes (**c**), but these changes are not included in the distinction between the formal and material constituents of emotions (**e**), apparently because they may be externally prevented. The formal element is the movement of the moving faculty which is understood from the point of view of the object. The nature of these 'spiritual' movements remains unclear (cf. II-1.23.4; 30.2). Before Aquinas, Albert the Great argued that emotions are occurrent qualities (**7g** above). As for pleasure and distress, Aquinas explains that while one might speak about a stone as loving its natural place and desiring to be there, it does not make sense to speak about the pleasure or pain of a stone. Like Aristotle and Avicenna, Aquinas holds that pleasure or distress is a pleasant or unpleasant awareness, and this is an aspect of emotions in general since some kind of pleasure is involved in positive emotions and some kind of pain in negative emotions (**f**).

Aquinas's discussions of emotions involve detailed terminological, psychological, and ethical remarks on general emotion types and their subcategories. For example, Aquinas treats shame as a type of fear. It is fear of disgrace which mars one's reputation. If one fears disgrace because of what one is doing, one feels embarrassment (*erubescencia*), and if it is feared because of what one has done, one feels shame (*verecundia*) (*Summa theologiae* II-1.41.4). Following Aristotle, Aquinas thought that dispositional shame is not a genuine virtue (**g**). For Aquinas and other thirteenth-century thinkers, see Marmo 1991, 1992; Murphy 1999; King 1999, 2002; Knuutila 2006, 239–255; Perler 2011, 43–119.

9 Late Medieval Theories

a. It should be noted that the concupiscible has as its object the agreeable or disagreeable in itself, so that for its part nothing more than apprehension is required for an act of pleasure or distress, or pursuit or flight, to necessarily follow. But the irascible does not have such things as its object, for the act of the irascible is to be angry ... The irascible, then, does not have as its object the arduous or appetible, which is the object of the concupiscible; it has as its object the offensive. (Duns Scotus, *Ordinatio* III.34, 35–36, 38 (ed. Vat. 10, 193–194, 196))

b. When it is commonly said that agreeable things give pleasure and disagreeable things distress, this should not be understood in a causal way, as if agreeability or disagreeability would be factors which cause pleasure and distress, but we abstract certain general notions from those separate absolute things which can cause these effects and from those which can cause pleasure or pain we abstract the notions of agreeability and disagreeability ... We postulate the sensitive appetite for no other reason than that there is such an inclination and the pleasure which follows apprehension; and since the form which is the end of the inclination belongs to the same power which is inclined, pleasure is in the appetite which is inclined. (Duns Scotus, *Ordinatio* III.15, 42–43 (ed. Vat. 9, 495–496))

c. Therefore, as soon as the present food moves the appetite to eat, immediately the image of the rod used for beating appears and simultaneously moves it to shrink from the food as from something unpleasant. And if this very disagreeable image is often repeated, all the more will the animal be driven away by the pleasant than attracted by it. (Duns Scotus, *Ordinatio* IV.45.3, n. 11 (ed. Wadding 10, 198))

d. For even if something is naturally agreeable to the will, for example the ultimate end, it is in the last analysis agreeable to it through the act of the will which accepts it and likes it. And when there is an agreeability of this kind through willing the object, or a disagreeability through willing against ... there will be an approximation of the object, namely the apprehension of the object of will or nill, and it seems that from this last thing there follows a passion of the will, joy or distress, which is caused by the object present in this way. (Duns Scotus, *Ordinatio* III.15, 47 (ed. Vat. 9, 498))

e. That distress, properly speaking, is a passion of the will is seen from the fact that it is not any of its operations ... This passion is not in the will through the will's being its efficient cause, because then it would be immediately under the power of the will, as volitions and nolitions are. But this is not the case, for when one wills against something and it happens, it is seen that the subject does not have distress under one's immediate power. If it had the will as its efficient cause, it would be an operation of the will, as a volition is caused by the will and is in the will. (Duns Scotus, *Ordinatio* III.15, 48 (ed. Vat. 9, 498–499))

f. Distress seems to be properly caused by four kinds of things disagreeable to the will: first, when something takes place against one's simple habitual and actual will;

second, when what takes place is habitually willed against and actually willed against by a conditional will, although it is actually willed, contrary to one's habitual inclination; third, when it is disagreeable to the will as nature; and fourth, when it is disagreeable to the sensory appetite and the will is not more vehemently inclined to the opposite than to the sensory appetite. (Duns Scotus, *Ordinatio* III.15, 60 (ed. Vat. 9, 505))

g. Pleasure and distress differ from the acts, as is clear from the fact that the acts of the will can occur without pleasure and distress, as is shown by an evil angel which intensely loves itself without having any pleasure. Similarly a good angel wills against something which takes place, for example, that a person guided by it would not sin, and when the person commits a mortal sin, the angel does not feel sad for this, for there is no pleasure among the damned and no sadness among the blessed. However, pleasure and distress cannot naturally occur without the acts, for they are caused and conserved by them. (William of Ockham, *Quodlibeteta septem* II.17.2 (OTh 9, 188))

h. Let us assume that the first act attributed to the will is liking or dislike an object, which arises from the apprehension of the object as good or bad, agreeable or disagreeable ... the will is not free with regard to that act ... Then upon this act of liking or dislike there sometimes follows another act which is usually called acceptance or rejection. This act is properly speaking called volition or nolition, because what I accept I will, and what I reject I will against, and vice versa ... the will is free with respect to that act ... Third, from this act of acceptance or, properly speaking, of volition, there necessarily follows love, and from the act of rejection, hatred; or perhaps the acceptance is formally love, and the rejection hatred ... From this acceptance or rejection, provided that with acceptance there is also an apprehension of what is accepted as something to be had but not had, there necessarily follows desire; and if there is an apprehension of it as something had and present, there necessarily follows pleasure. And if there is an apprehension of what is rejected as something had, there necessarily arises distress, and if as something that might be had and is not had, there arises the opposite of desire ... the will is not free with respect to those acts, namely, pleasure and distress, except perhaps consequentially, in so far as it is free with respect to the preceding acts or the acts upon which such pleasure or distress necessarily follows. (John Buridan, *Quaestiones super decem libros Ethicorum* X.2 (205va–b))

i. An effect which can be caused by the will has cognition as its partial efficient cause. Therefore, any act of love which can be caused by the will requires for its being caused by the will a cognition which is really distinct from love ... Second, I state, not as an assertion but as an opinion, that each act of appetite, hatred, or enjoyment is some kind of cognition or apprehension, for each experience of an object is some kind of cognition of it. And each appetitive act is some kind of experience of the object, that is, by which such an object is experienced, for all vital acts are experiences. (Adam Wodeham, *Lectura secunda* I.5.4 (277–278))

Duns Scotus gave up the idea of appealing to arduousness in distinguishing between concupiscible and irascible emotions, regarding irascible emotions as reactions to what is offensive (a). Peter John Olivi had earlier criticised the assumption of two sensory moving powers; see *Quaestiones in secundum librum Sententiarum* 69 (II, 626–628); Scotus did not question this, but rather what belongs to the irascible power. He also argued against the influential Avicennian idea that there are ‘intentions’ in things which can be grasped by an estimative power. Criticising Henry of Ghent’s view of grasping agreeable (*conveniens*) and disagreeable (*inconveniens*) objects in this sense, Scotus explains that agreeableness and disagreeableness are relations between things, and relations are not perceived by the senses; in fact, perceiving certain objects is pleasant and perceiving others is unpleasant, which is why the objects are called agreeable or disagreeable (b). Representations of a certain kind simply cause certain behavioural changes in certain animals, and other changes in other animals. Referring to Avicenna’s example of a dog and a stick, Scotus explains how an animal learns to reject certain food on the basis of bad experiences (c).

According to Scotus, the division between concupiscible and irascible emotions could be applied to the will as well (*Ordinatio* III.33, n. 62 (ed. Vat. 10, 170)). He treats liking (*complacencia*) and dislike (*displacencia*), the non-deliberated first reactions and concomitants of other acts, as analogous to sensory emotional reactions, except that they are free acts. Scotus’s most original contribution to the theory of emotions is the idea that the pleasure and distress of the intellectual soul are non-voluntary passive states of the will, and in this sense similar to the passions of the sensitive soul; he thereby questions the sharp divide between the passions of the sensory soul and the analogous phenomena in the will (d–e). There is an elaborated list of the factors which are sufficient to cause distress as a passion of the will. These involve apprehensions that what takes place is (1) what one actually wills against, (2) against the natural inclination to happiness (*affectio commodi*) even though no particular act of will is actual, (3) against sensory desire, or (4) in accordance with what is willed in circumstances in which the opposite is preferred but cannot be achieved. There are corresponding factors which are sufficient to cause pleasure, the other passion of the will (f). Scotus made use of the traditional doctrine of two inclinations of the will, *affectio commodi* and *affectio iustitiae*; see p. 553 below. He thought that because the passions of the will influence the activities of people greatly and they are also influenced by the inclinations just mentioned, moral education should give strength to the inclination of justice and moderate the inclination to pleasure.

The main lines of Ockham’s view of emotions are similar to Scotus’s theory. Following Scotus, he argues for a real distinction between love and pleasure by referring to an evil angel’s continuous love of itself without pleasure (g);

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cf. Duns Scotus, *Reportatio* I-A, 1.2.2.1 (106–108). Scotus and Ockham regarded love and pleasure as really distinct even in the ultimate beatific enjoyment of God – a view which was criticised by many theologians. Ockham held, as distinct from Scotus, that joy and distress as the passions of the will presuppose other acts of the will – Scotus’s further conditions mentioned above were not sufficient to cause pleasure or distress in Ockham’s view. Ockham did not operate with the distinction between concupiscible and irascible emotions, possibly because he gave up the idea of such moving faculties as separate entities. In applying the emotional terms to the acts of the will, John Buridan follows Scotus and Ockham, except that he taught that liking and dislike first movements are not free – because of their dogmatic voluntarism, Scotus and Ockham regarded volitions without an external causation as free. Buridan’s modification was influential because many authors regarded it as a useful analysis of the freedom of the will (**h**). In his analysis of emotions Adam Wodeham, a student of Ockham, merely operated with cognitions, judgements, and apprehensions. Volitions and passions are preceded by cognitions, which are their partial causes and of which they are evaluations. Emotions are value judgements or judgement-like evaluations in a way similar to the Stoic theory (**i**). For discussions of fourteenth-century developments, see King 2002; Boulnois 2003; Hirvonen 2004; Knuutila 2006, 256–286; Perler 2011, 120–197.

10 Renaissance Classifications of Emotions

a. The concupiscible power is directed to its object, which is sensorily pleasurable, in accordance with liking or dislike ... the irascible power is directed to its object, which is arduous and difficult, in accordance with strength or weakness. (Gregor Reisch, *Margarita philosophiae* XII.4–5)

b. And such a consensus, which the fantasy has with the heart and the spirits, is primarily found in what are called the affects of the soul: joy, love, hope, laughter, wonder, ecstasy, distress, fear, anger, shame, pity and others of this kind. (Fracastoro, *De sympathia et antipathia* 16)

c. About good, there is first love and then desire and, if it is arduous, hope or despair, and if it achieved, there will be joy. About evil, there is first hate and then avoidance, and if it is arduous, courage or fear, and if it is present, there is anger, and if the evil is not overcome, there will be distress – this may occur before anger. This is the order of occurrence ... It is often assumed that there are four passions of the soul: joy, distress, hope and fear. The first two are assumed because they are the ends of all passions mentioned above and the two others are assumed because they are immediately born

from the concupiscible, hope from desire and fear from hate. For this reason these are assumed as principal passions ... Third conclusion: the irascible and the concupiscible are two genuinely distinct powers of the soul. (Franciscus Toletus, *Commentaria una cum quaestionibus, in tres libros Aristotelis de anima* III.26)

d. The reasons which are offered do not seem to show with certainty that there is a real distinction between these powers, since one could easily say that there is one sensitive power which is directed at the good apprehended by the sense and that it has acts by which it pursues this good, being called the concupiscible in this case, and again acts by which it protects this good against things contrary to it, being called the irascible in this case. (Suárez, *De anima* V.4.3 (761b))

e. On the basis of these considerations the taxonomy of eleven emotions is congruous even with the fourth doctrinal method which could be considered here, although it is not necessary because emotions can be treated in other ways as well ... We follow Thomas's taxonomy of eleven emotions because it is more commonly used than others and provides an easier explanation of the origin and connection among all emotions. (Suárez, *De actibus, qui vocantur passiones* 1.2.5–6 (475b))

f. All movements of the soul are about some good or some evil as the opposite of good. These movements are toward the good, away from evil or against evil. The good and the evil may be present, future, past, or possible. The absence of good counts as evil, and the absence of evil counts as good. As soon as the good becomes known to the mind, it pleases us. This is called liking; it is like the breeze of a rising movement. If it is confirmed, it turns into love. The movement about a present good which we have attained is joy; the movement about a future good is called desire and it falls within the boundaries of love. The first movement with respect to evil is called irritation – it is the opposite of liking. If it is confirmed, it becomes hatred. The movement about a present evil is sadness, and the movement pertaining to a future evil is fear. The movements against a present evil are anger, envy, and indignation. The movements against a future evil are confidence and courage. Under the heading of love are favour, reverence and pity; under joy, pleasure; under desire, hope; and under sadness, bereavement. Pride is a monster composed of many emotions: joy, desire and confidence. (Vives, *De anima et vita* III.1 (426))

g. Whatever is judged to be good, as soon as it is presented to the will, moves and attracts the will by some natural affinity similar to that between truth and the mind or between beauty and the eyes. This movement of the will, which we shall call liking or endearment, is a certain cheerfulness of the will, something like the facial expression of a smile, by which the will enjoys what is good and congenial to it ... Love is confirmed liking and can be understood as an inclination or movement of the will toward the good, a going out of the will to embrace the approaching good, which results in a craving to be united with it. This kind of love is called desire or concupiscence when its object is judged to be good for no other reason than its usefulness, because it is useful to the lover ... There are, however, occasions when something is loved for itself without any consideration of utility to us. (Vives, *De anima et vita* III.2 (428))

h. Just as if the movements of the sea, one is that of a gentle wind, one is stronger, and one vehement ... so in these agitations of the soul some are light and could be characterised as the beginnings of rising movements, some are more intense, and some shake the whole mind and expels it from the seat of reason and the condition of judgement. These are real disturbances and cases of impotence, since now the mind is hardly in control of itself, becoming instead subject to an alien power, and they are cases of blindness because of which the mind does not see anything. The former are more correctly called affections and the later commotions or excitements, which the Greek call *pathē*, that is, passions, for the whole mind suffers, as if from a blow, and becomes agitated. (Vives, *De anima et vita* III, introduction (424))

Many traditional classifications of emotions were used and discussed by Renaissance thinkers. In his influential *Margarita philosophiae*, Gregor Reisch presented John of la Rochelle's taxonomy (**a**). For the details, see above (**7h**).

The list of emotions in Fracastoro's treatise on the attraction and sympathy in natural philosophy shows some similarities to Avicenna's account of general and especially human emotions (**b**; see **6** above). Aquinas's theory was the most quoted classification in sixteenth-century second scholasticism; it is summarised and used by Toletus (Francisco de Toledo), an influential Jesuit author from the second half of the sixteenth century. He also mentions the fourfold Stoic division which was often used (**c**). The Thomist psychology and taxonomy of emotions was employed in some widely-read vernacular works: *The Passions of the Minde* (1601, second edition in 1604) by Thomas Wright, a Catholic priest and religious controversialist, *Tableau des Passions Humaines, de Leurs Causes et de Leurs Effets* (1620) by the French theologian Nicholas Coeffeteau (an English translation *The Table of the Humane Passions, with their Causes and Effects* by E. Grimeston in 1621), and *A Treatise of the Passions and Faculties of the Soule of Man* (1640) by Edward Reynolds, bishop of Norwich. For Montaigne's eclectic remarks on emotions, see Perler 2011, 198–277.

Suárez argued that the words 'concupiscible' and 'irascible' do not refer to two sensible moving powers, but to two modes of one power (**d**). Emotions could be conceptualised in ways different from Aquinas's account, Suárez says, but he prefers Aquinas's division of eleven emotions for pragmatic reasons (**e**). See also King 2002; Knuutila 2014. The classification of emotions in Juan Luis Vives's influential book combines elements from various theories (**f**); its structure shows similarities to Buridan's account (see **9h**), although other emotions have been added. In explaining the emotion of love, Vives speaks about it as a will in an Augustinian way. This was in agreement with late medieval tendency to extend the theory of emotions to the will. The

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distinction between concupiscible and amicable love was a standard medieval doctrine (g); for Vives's psychology, see Casini 2006.

In describing the stages of an emotional movement in a way which shows some similarities to Seneca's *De ira* (h), Vives suggests that the word *affectio* is applied to incipient or moderate emotions and *passio* to unrestrained emotions. Elsewhere he uses *affectio* and *affectus* as referring to emotions in general or, as distinct from *passio*, to gentle emotions. It is of some interest that in his classic *Institutio oratoria*, well-known to Vives, Quintilian states that emotions fall in two classes, one of which is called *pathos* by the Greeks and this is correctly expressed in Latin by *adfectus* (II.421). This is not what Vives says.

There was no fixed usage for these words in the sixteenth and seventeenth centuries; some authors used *affectus* and others *passio* or passion (in English and French) as a generic term for emotions, or they were used interchangeably. For the popularity of the term 'passion', see the titles of the works by Wright, Reynolds and Coeffeteau mentioned above. In his treatise *An Essay on the Nature and Conduct of the Passions and Affections*, Francis Hutcheson writes: 'When the word passion is imagined to denote anything different from the affections, it includes a strong brutal impulse of the will, sometimes without any distinct notion of good, public or private, attended with a confused sensation either of pleasure or pain' (third edition 1742, 28). Many other eighteenth-century authors, Hume for example, used 'passion' to cover all kinds of emotions, but he also uses the notion of sentiment which gained popularity in the British philosophy of the eighteenth century. The new term 'emotion' was sometimes discussed in this context; for example, Henry Home (Lord Kames) writes in his *Elements of Criticism* (1762) that: 'An internal motion or agitation of the mind, when it passeth away without rising desire, is denominated *an emotion*: when desire is raised, the motion or agitation is denominated *a passion*' (I.2.1.1 (54)).

11 Renaissance Views of the Nature of Emotions

a. Following Aristotle, I think that the genus of perturbations can be defined as follows. A perturbation is a movement of the sensitive appetitive power and the spirit of the heart with respect to an object which, through the power of imagination, appears as pleasant or harmful, for avoiding the harmful or enjoying the pleasant. (Francesco Piccolomini, *Universa philosophia de moribus* I.5 (62))

b.

In the strong affects of the soul, the spirits and the blood are moved	{	inwards	{	quickly, as in fear slowly, as in sadness
		outwards	{	quickly, as in anger slowly, as in pleasure or joy

(Jacob Wecker, *Medicinae utriusque syntaxes* (181)).

c. Joy causeth a cheerfulness and vigour in the eyes, singing, leaping, dancing and sometimes tears. All these are effects of the dilatation and coming forth of the spirits into the outward parts, which maketh them more lively and stirring. We know it hath been seen, that excessive sudden joy hath caused present death, while the spirits did spread so much as they could not retire again. (Francis Bacon, *Sylva sylvarum* VIII.713)

d. The fantasy has a certain consensus with the whole, but mostly and particularly with the heart, for the heart is immediately affected by the same species as the fantasy, whether these are good or evil ... Nothing prevents us saying that while the heart does not know through the same species [as the fantasy], it can be contracted and dilated and show signs of terror, anger and, joy, because the soul, as was stated above, is one in the whole animal. The movement of one part of an animated whole does not require that all moving parts know by themselves the good and the evil; it is sufficient that there is a first part which knows and through the knowledge of which the parts of the whole move in a way which is good for all or some. Therefore when the species of good and evil are received by the fantasy, the whole animal moves through its parts in one way or other ... The end of animals in nature is known to God and common nature, but it is not known to these spirits. The movements as parts of the whole show the known end of nature, and it is not inconvenient that the parts of the whole move up and down and sideways. (Fracastoro, *De sympathia et antipathia* 16)

e. We can more easily avoid these problems by denying the active concurrence of cognition to the act of appetite, maintaining that through representing an object it merely provides a condition, after which the appetite produces its act through the natural sympathy between these powers, to which these powers being rooted in the same soul best contributes. The soul, or the subject through the soul, is that which principally operates and uses these faculties and thus, when it perceives an object agreeable to it by one faculty, it strives for it by the other – not through effecting one by another but because when it perceives the object through one faculty, it is excited to operate through the other. This excitement does not result from a real and effective immutation, but from a metaphorical or final one, thus not requiring a local propinquity but merely that of the soul, so to say. (Suárez, *Disputationes metaphysicae* XVIII.8.40 (665–666))

f. And it belongs to the nature of the spirit that when it perceives or understands something, it immediately desires or avoids it and decides whether it is should be

desired, avoided or refuted, as well as wholly accepts or refutes it. It cannot help not desiring or avoiding certain things and in doing this it cannot desire otherwise. However, it can strengthen or suppress its natural desires and hates, and acting more or less intensively with respect to them is completely under its control. (Telesio, *De rerum natura* IX.1)

g. But one might ask whether [joy] is an act produced by the will or whether it is merely a passion, for Scotus, in discussing joy above, says that it is merely a passion and that fruition, as far as it is an action, is in the intellect, and as far as it is a passion, it is in the will. The basis of Scotus's view is that all actions of the will are under its control, but this is not the case with joy and distress ... However, I say that fruition is an act which is effectively produced by the will ... The strongest reason for this is the common principle that vital acts proceed from an intrinsic principle, and joy is most manifestly a vital act ... It is possible that it is a certain act of the will, which is a vital act, a certain rest or suavity or sweetness, which is born from the appetite itself by the presence of the good which is loved. (Suárez, *De voluntario et involuntario* 7.1.8–10 (252a–b))

h. There be two things that do assault this castle of constancy in us, false goods, and false evils: I define them both to be such things as are not in us but about us: and which properly do not help nor hurt the inner man, that is, the mind ... From these two roots do spring four principal affections which do greatly disquiet the life of man: desire and joy, fear and sorrow. The first two have respect to some supposed or imagined good, the two latter unto evil. All of them do hurt and distemper the mind, and without timely prevention do bring it out of all order, yet not each of them in like sort. For whereas the quietness and constancy of the mind rests, as it were, in an even balance, these affections do hinder this upright poise and evenness; some of them by puffing up the mind, others by pressing it down too much. But here I will let pass to speak of false goods, which lift up the mind above measure (because thy diseases proceed from another humor) and will come to false evils, which are of two sorts, public and private. Public are those, the sense and feeling whereof touches many persons at one time. Private do touch some private men. Of the first kind are war, pestilence, famine, tyranny, slaughters, and such like. Of the second be sorrow, poverty, infamy, death and whatsoever else of like nature that may befall any one man. (Justus Lipsius, *De Constantia*, English translation by John Stradling, 1595, I.7)

i. It seem to me that, according to right and true understanding, the sage is not rigid, hard and free from the occurrences of distress, fear, desire, and joy, as far as these are first and incipient movements, but feels these and is in some way moved by these without accepting and being committed to them. What else are the Academians themselves teaching than that they should be moderated, mastered and have no share in reasons. Therefore they are despised and kept in control, and we rightly regard this as cleaning while they regard it as gardening. (Justus Lipsius, *Manuductio ad stoicam philosophiam* III.7 (159))

Independently of the increasing doctrinal pluralism, the Renaissance theories did not deviate from the traditional ideas of the cognitivity and controllability of emotions. Sensory emotions were regarded as psychosomatic phenomena, and medical theories of the humours and spirits were relevant in this context. Francisco Piccolomini summarised the received view in his influential treatise on ethics (a). Emotions were often discussed in medical treatises; Wecker's medical handbook (1576) presents the traditional classification of emotions on the basis of various movements of spirits as a table (b). (See also 6a–b above; Siraisi 2012.) Many authors made use of this medical terminology; Francis Bacon also mentions the traditional idea that strong movements of the spirits may lead to death (c).

In his natural philosophy, Fracastoro was particularly interested in natural sympathies between things for which he tried to find explanations. Why do the heart and the vital spirits move in apparently sympathetic ways when affecting things are represented in imagination? Fracastoro seems to operate with a concept similar to ancient ideas of cosmic sympathy (d). Suárez's answer continues this line of thought, being based on his general view that there are no causal connections between vital and psychic acts, although some of them may be necessitated by others in the sympathetic network of the acts of the soul (e). Joy is characterised as an action necessitated (but not caused) by achieving the object of one's desire (*De voluntario et involuntario* 7.1.10 (252b)). See also *Commentaria una cum quaestionibus in libros Aristotelis De anima*, 11.2.3; *De anima* V.5.33; *Disputationes metaphysicae* XXIII.3.15; Knuuttila 2014. Basic passions consisting of perception and affect are responsible for all changes in Telesio's panpsychist universe. Attending to itself, the human soul is able to control its necessary basic movements (f). See Boenke 2004.

The Scotist theory of the passions of the will was often discussed by theological authors (Knuuttila 2012). Suárez says that Scotus's theory is true, except that joy and distress of the will are not passions. The background to this remark is Suárez's theory that vital acts have no external causes (g). Justus Lipsius's *De Constantia* (1584), translated into English in 1595, was an influential work in which the Stoic idea of freedom from emotions was recommended (h). Before Lipsius's works, Cicero's *Tusculan disputations* was the main guide to the Stoic theory of the passions. Lipsius regarded the Stoic doctrine as compatible with Christianity, stressing that Stoic first movements (3h above) could be understood as emotional suggestions which are not assented to (i). This brings the Stoic theory close to metriopatheia views, although Lipsius thinks that the Stoics do not let the first movements develop. A similar defense of Stoicism was put forward in Caspar Schoppe's *Elementa philosophiae stoicae moralis* (1606). While Stoic *apatheia* was often criticised by Renaissance authors, many writers found the Stoic ataraxy a good pedagogical model with respect to spontaneous first movements of desire or will. (See Krays 2012.)

Chapter 30

Emotions in the Seventeenth and Eighteenth Century

Lilli Alanen

While seventeenth-century accounts of passions reflected concerns raised in earlier discussions of passions both in the medical tradition and in the moral treatises of the Aristotelian or Neo-Stoic tradition, new issues emerged as the general picture of the physical universe and human nature changed. The traditional approaches still dominated university discussions, but those who endorsed the mechanistic philosophy of nature, such as Hobbes, Descartes, Malebranche, and Spinoza, searched for new ways of explaining and controlling emotions by treating them as natural phenomena obeying the same laws as the rest of nature. The question of the role of reason in governing the passions took on a new urgency within the mechanistic framework.

Descartes developed a mechanistic physiology to serve as the foundation for a naturalist therapy of the passions, understood as not merely cognitive but as complex psycho-physical states dependent upon the union between the mind and the body. As a purely thinking thing, the mind is radically different in nature from the body, which belongs to the realm of extended and mechanically moving matter. Whereas the human body is subject to the physical laws of motion, the mind, though intimately united with and affected by the body, is supposed to preserve its own power of rational activity. In spite of its many problems, Descartes's dualistic doctrine was tremendously influential and offered a new general framework within or against which subsequent theories of mind and passions positioned themselves.

All the capacities of mind, from intellect, reason and will to sensory perception, imagination and emotion, were henceforth understood in terms of different kinds or 'modes' of thought (i.e., as perceptions or ideas). Rejecting Scholastic faculty-psychology, Descartes retains a distinction between intellect and will as different

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powers of one unitary soul, dividing thoughts in two main categories, actions and passions. The former, volitions and judgements, originate within the mind itself, the latter are received in the mind through the action of extra-mental causes and encompass all our sense perceptions. Sense perceptions are passions in a general sense a subclass of which the affects or passions in a strict sense are. They are marked by specific physiological changes in the body, which cause and strengthen them, and by the behavioral reactions to which they dispose the body and incline the will. However, their first or primary cause is cognitive and consists in the perceptions of something as good or evil. Descartes's system of classification follows the tradition of basing passions on their *first* or primary causes which constitute their 'formal objects'. Passions are thus complex cognitive and conative states and can be generally described as more or less confused evaluative beliefs, representing some perceived present, past or future good and evil, which are accompanied by more or less violent physiological changes (1). They can all be derived from one or several of the following six basic passions: wonder, love, hatred, desire, joy, and sadness. The passions serve to keep our mind focused on objects which are relevant to our bodily or mental well-being (2).

Although the passions are all good by nature, their function being to serve the good of the body and to preserve the mind-body union, they tend to exaggerate the good or evil they represent and can be dysfunctional if not mastered by reason. Appealing to what he calls the principle of 'Natural Institution', according to which certain motions in the body and certain thoughts in the mind occur together, Descartes argues that what nature and habit have joined can be separated through training and re-habitation. The mastery of the passions is based on the will and its unconditioned power of free decision (*liberum arbitrium*), whereby the mind can assent or not assent to whatever ideas or beliefs passions present to it and intervene in the pursuit or avoidance of things to which they incline it. In explaining the natural functions of the different passions according to the order of nature or natural institution, Descartes distinguishes the point of view of the mind, of the body and of the mind-body union (3). What may be good for the mind or soul may not, for example, be good for the body or mind-body union, and vice versa.

Because naturally and mechanically triggered passions are uncritical evaluations inclining us to pursue or avoid their objects, they must be distinguished from rational evaluations based on independent reflective judgements of reason. Descartes also distinguishes between bodily triggered passions and intellectual or interior emotions, the latter being caused by the mind's own actions, that is, by true rational evaluative judgements, through which the passions caused through the body can be corrected and their effects controlled. Thus generosity, which for Descartes is both a passion and the highest virtue, serves as a general remedy against harmful passions. It is based on true self-esteem, the awareness that one uses one's will to assent only to what is clearly and distinctly understood, or when such perceptions are lacking, that one has done everything one can to find the best possible course of action (4).

Malebranche expands on Descartes's account of the passions as concomitant states of mind and body. He too divides thoughts in two main kinds, passive perceptions and active volitions, but whereas Descartes defines passions as a kind of perception, Malebranche follows Augustine in defining them as acts of the will. The

will in itself is an inclination or force moving the soul toward the good in general, which is determined to actual emotions by intellectual or sensory perceptions of some particular objects as real or apparent good or evil things. The emotions of the will, of which love is the basic mode, are accompanied by particular sentiments or feelings in the soul and specific, individually conditioned physiological reactions, which strengthen them and keep the mind in their power. They are felt with an inner pleasure (*douceur*), which makes all passions, even hate and sadness, seem appropriate with respect to their object, and brings us to consent and abandon ourselves to them, thus enslaving us to sensible goods. No matter how misleading they are, they entice us to justify them. The function of the passions is to preserve the body of whose states and needs they inform the soul; therefore, they tie the soul not only to its body but through the body to society and the entire universe. By the laws of the mind-body union, even intellectual emotions are accompanied by bodily disturbances and sensible emotions. The bodily expressions of the emotions have an important social function in helping us to read and share fellow humans' emotional reactions by transferring, through direct imitation, their violent emotions onto us, as when, in seeing other beings like us in great pain or joy, we feel distress or joy accordingly (5). Malebranche's account of passions and their associations, as well as the role given to imagination in the genesis of the passions and their power over us, were influential among his contemporaries and successors. Many themes of his psychology resurface and are further developed in the writings of British empiricists such as George Berkeley and David Hume.

While Descartes and Malebranche ground their analyses of the passions as complex psychosomatic states in their dualistic view of human nature, Hobbes's account represents an uncompromisingly materialist view of the human being as part of extended physical nature. There is no force or power or principle of activity at work in nature other than mechanical movement, and human agents are no exception. The mind is identified with the brain whose cognitive powers are explained through images or conceptions which are caused by the impact of external objects on the sensory system of the body. These images are nothing but cerebral movements representing the things causing them. When they proceed to the heart, they cause delight (pleasure) or hatred (pain) depending on how they affect the body's own vital movement. Voluntary movements or 'animal motions' (for example, going, speaking, moving one's limbs), caused by minute motions initiated through the images in the head, define the body's 'endeavour' (*conatus*). Passions are these 'interior beginnings of voluntary motions'. The endeavour or striving towards something is called appetite or desire whereas striving away from something is called aversion. Some appetites are natural, e.g., sexual appetite, hunger, and thirst; others are learned through experience and vary according to the individual's particular bodily constitution and experience. All evaluations are based on appetites, as there is nothing that can be called absolutely or invariably good. Like Descartes, Hobbes assumes that there are six 'simple' passions: appetite/desire, aversion, love, hate, joy, and grief, but he takes them to be directly prompted by the pleasure or displeasure caused by the ways the vital movement of the body is affected. Other passions, (some 30 listed in the *Leviathan*), are modifications of these simple passions on the basis of various beliefs or different combinations of their basic movements.

They presuppose language, speech and convention. Social competition, which is important in Hobbes's system of emotions, is based on the fact that strivings of varying strength oppose each other, yielding passions of glory and honour and the desire for recognition of one's power and social position. Although the dominating emotion in the state of nature is fear, which serves as the basic moderator of other passions in society as well, Hobbes also recognises positive social emotions like benevolence and sympathy (6).

Although Spinoza's psychology of emotions builds on the theories of his two main predecessors, he accepted neither Hobbes's reductionist materialism nor Descartes's substance dualism. Instead, he posited thinking and extension as two independent attributes or explanatory categories for understanding one and the same nature (substance monism/attribute dualism). Considered as mental, the states and processes of a thing can be explained as modes of thinking which are identical to and follow the same order as bodily states or processes explained in terms of the modes of extension. This holds universally and passions are no exception: *qua* mental, they are confused ideas or perceptions of what, *qua* bodily, are physiological changes or affections of the states of the body and its striving to endure. Affections of the body are due to the interaction of movements resulting from a body's own striving to persist in being and the forces of external objects acting on it according to the laws of physical nature. Their mental counterpart, ideas of affections (or sensations, perceptions, images), are not caused by physical processes, but by other, more or less obscurely perceived antecedent ideas and perceptions, the connections of which follow and reflect the order of the bodily affections.

Emotions or affects (and their ideas), which form a subclass of affections (and their ideas), come in two kinds: active or passive. The latter, which are passions properly speaking, consist in dynamic transitional states whereby our fundamental striving (*conatus*) to preserve our being is affected by external causes. Insofar as the passive affects all originate outside us and depend on causal circumstances which we cannot control, they keep us, through their own dynamics and associations, in their 'bondage'. (7) Spinoza's road to freedom from harmful passions goes through intellectual understanding of the true causes of the affects we suffer as parts of nature and its unchanging laws. True self-knowledge comes with the highest kind of contentment and an intellectual love of God or Nature, generating other active affects like tenacity and nobility with their derivatives (8).

Christian Thomasius, a German Enlightenment philosopher and moralist, who opposed the rationalist doctrine of innate ideas and yet defended the universality of reason, developed an eclectic account of emotions which was influential in his time. Thomasius was particularly interested in a kind of sociology of emotions. His more famous contemporary was Leibniz, who did not write extensively on the emotions but defended some new ideas, mainly in commenting on Locke's *Essays on Human Understanding*. Like Spinoza, Leibniz emphasises the dynamic nature of mental states and takes passions to be confused perceptions expressing variations of basic strivings or tendencies. Leibniz also regards the whole nature as sentient or perceiving – all things including stones and toasters perceive to some extent although their perceptions are insensible and only animals and humans have

memory and conscious perceptions. Human beings, in addition, have reason, are self-conscious, and can form distinct and adequate thoughts. Consciousness, for Leibniz, thus comes in degrees on a continuous scale from unnoticed and subconscious 'minute perceptions' (*petites perceptions*) to conscious and fully articulated clear and distinct, adequate and self-conscious thoughts which he calls 'apperceptions' (*apperceptions*). Human passions are somewhere in the middle and upper part of the scale; they can be the joint product of innumerable unconscious affects or clear and vivid yet confused and incomplete thoughts, but whether we distinguish them or not, they consist in notable changes of our inclinations having determinate effects on our dispositions, actions and behavior. Like Descartes and Spinoza, and to a greater extent than Thomasius, Leibniz remains fundamentally optimistic about the power of reason to moderate the passions through distinct, adequate cognition (9). Leibniz believes that better probable knowledge of one's unconscious movements serves to modify behaviour in a way which helps to control these plural tendencies.

More traditional late seventeenth- and early eighteenth-century discussions of emotions influenced by religious ideas were often more pessimistic. Recognising the power of strong passions, thinkers in this tradition regarded the prospects for reason's controlling the passions to be bleak without the assistance of grace. Thus Jean-Francois Senault, a French Oratorian whose *De l'usage des passions* (1641) was widely read and translated, as well as the influential English theologian and rationalist philosopher, Samuel Clarke, in a sermon on *The Government of Passions* (1711), sided with those who saw the weakness of pure reason as a consequence not just of bad habits but as a sign of the corruption of human nature since the Fall. These authors emphasise the role of faith and virtue, assisted by divine grace, to support reason in the governance of passions.

The Lord of Shaftesbury, who was educated by John Locke, defended a teleological view of nature and human nature. He argues in his *Characteristics of Men, Manners, Opinions, Times* (1711) that the natural end of human nature is virtue, and that human beings have a capacity for a special kind of second order affections which have their natural affections or emotions and actions as their object, and to which he refers as the sense of right and wrong. They also have an important role as motivators. His doctrine which combines rationalism and sentimentalism is considered the first 'moral-sense' theory developed in reaction to Hobbes's psychological and ethical egoism. Francis Hutcheson too thought there were more than the five external senses, among others a public sense whereby we are pleased when others are happy and suffer from their misery, and a moral sense for perceiving and taking pleasure in virtue and disapproving vice. Reason can guide our actions by choosing the means but motivation comes from the moral sense which also determines their end. While the moral sentiments or the sensations of the moral sense are subjective modifications of mind, the objects which cause them are real qualities or powers of human character and action (10).

Samuel Clarke, who in spite of his pessimism of reason in itself did not doubt the power of rationalist arguments in the service of faith, was one of the main targets of David Hume's empiricist attack on the power of pure reason in his *Treatise of*

Human Nature (1741). Hume, a committed naturalist, devotes the second of the three books of his famous and controversial *Treatise* to analysing the mechanics of emotions and their role both in the association of ideas, belief-formation and motivation. Hume differs from his predecessors in wanting his science of mind to be ‘experimental’ and based on observation, both introspective and external, gleaning up and comparing its ‘experiments’ through ‘a cautious observation of human life’, taking them ‘as they appear in the common course of the world, by men’s behavior in company, in affairs, and in their pleasures’ (*Treatise*, Introduction). Hume takes perceptions, divided into impressions and ideas, which are weaker copies or reflections of impressions, as his ultimate facts in investigating human understanding. In his account of passions he distinguishes what he calls direct passions like pleasure, pain and desire arising directly from impressions, and indirect passions which are transitional states involving ideas of their objects and causes and the ways these affect desire. The latter are analysed in terms of a ‘double association’ principle whereby relations of associations of impressions concur with relations of ideas to determine the course of our thoughts, desires and actions.

While recognising, like Spinoza and Hobbes did, the role of self-preservation and egoism, he also sides with his Scottish predecessors Shaftesbury and Hutcheson in assuming that we are naturally equipped with moral and social sentiments, seeing benevolence, sympathy and altruism as ‘original’ (non-reducible) endowments of human nature. Hume does not however accept final causes or appeal to divine providence to back up these assumptions or to ground morality. Human animals are naturally social and moral, able to respond through sympathy to each other’s joys or miseries and they do take pleasure in virtuous traits of character and actions while disapproving features called vicious. Reason has no power to motivate or to oppose passions nor can reason alone make moral distinctions which are derived from moral sentiment. It serves as an instrument of sentiments and passions (11). Reason serves also the moral sense in reflecting on and correcting particular subjective sentiments by helping us to take up what he calls ‘the general point of view’ in forming more stable moral judgements. Hume was a close friend and mentor of Adam Smith who developed some of Hume’s ideas in his *Theory of Moral Sentiments* (1759). Smith made sympathy, understood as the ability of seeing the point of view of another, a basis for his social and moral theory. He also emphasised the importance of impartiality and general rules for moral judgements and justice.

1 Descartes’s Conception of Emotion and Their Classification

a. ...we do not notice any other subject that would act more immediately on our soul than the body to which it is united, and ... therefore we should think that what is a passion in the former is usually an action in the latter. Hence there is no better way to come to know our passions than examining the difference between the soul

and the body, so as to know to which of the two we should attribute each of the functions we find in us. (*Les passions de l'âme* 2, AT XI, 328)

b. After having considered in what manner the passions of the soul differ from all its other thoughts, it seems to me that they could be generally defined as those perceptions, sentiments or emotions of the soul which we refer particularly to it, and which are caused, maintained and strengthened by some movement of the spirits ... But it is even better to call them 'emotions' of the soul, not only because this term may be applied to all the changes which take place in it, that is, to all the thoughts occurring in it, but in particular because, of all the sorts of thought which it can have, there are none that agitate and upset it so strongly as the passions. (*Les passions de l'âme* 27–28, AT XI, 349–350)

c. From what has been said above we know that the last and most proximate cause of the passions of the soul is nothing but the agitation whereby the spirits move the little gland in the middle of the brain. This does not sufficiently enable us to distinguish passions from each other, but we must investigate their origins and examine their first causes. They may sometimes be caused by an action of the soul, which sets itself to conceive some object or other, or by the mere temperament of the body, or by random encounters of the impressions in the brain, as when we feel sad or joyful without being able to say why; it appears, however, from what has been said that all such passions may also be excited by objects which move the senses, and that these objects are their most common and principal causes. From this it follows that, in order to discover them all, it suffices to consider all the effects of these objects. (*Les passions de l'âme* 51, AT XI, 371–372)

d. I notice, moreover, that the objects which move the senses do not excite different passions in us because of all their differences, but only because of the various ways in which they may harm or benefit us, or in general are of some importance for us. The function of all the passions consists in this alone that they dispose the soul to want the things which nature tells useful for us and to persist in this volition. The same agitation of the spirits which usually causes the passions also disposes the body to make movements which help us to achieve these things. That is why an enumeration of the passions requires only that we examine, in order, all the various ways in which our senses can be moved by their objects as having importance for us. And I shall now enumerate all the principal passions according to the order in which they may thus be found. (*Les passions de l'âme* 52, AT XI, 372)

e. I well know that I depart in this from the opinion of all those who have previously written about it, but not without good reason. For they derive their enumeration from a distinction they draw in the sensitive part of the soul between two appetites one of which they call 'concupiscible' and the other 'irascible'. And since I recognise no distinction of parts within the soul as I have said above; I think their distinction means nothing else than that the soul has two faculties, one of desire and the other of anger, yet because it has in the same way the faculties of wonder, love, hope and anxiety, and thus of receiving in itself every other passion, or to execute the actions to which these passions incline it, I do not see why they wanted to refer them all

to desire or to anger. Moreover, their enumeration does not include all the principal passions, as I believe mine does. I speak only of the principal passions, because we might still distinguish many other more specific ones, and their number is indefinite. (*Les passions de l'âme* 68, AT XI, 379)

f. But the number of those which are simple and primitive is not very large. Indeed, in reviewing all those which I have enumerated, we can easily see that there are only six of this kind: wonder, love, hatred, desire, joy and sadness. (*Les passions de l'âme* 69, AT XI, 380)

Descartes starts his treatise on the passions by invoking the Aristotelian concepts of action and passion, noting that a change in a subject is considered a passion with respect to the subject itself and an action with respect to its agent cause; yet action and passion are one and the same phenomenon considered from these two points of view (a). Descartes and his followers use the term 'perception' as equivalent of 'idea' or 'thought'. The ideas or perceptions of the intellect are clear and distinct and those of the senses are more or less clear but never distinct. Passions in a strict sense are a subclass of thoughts, i.e., perceptions or sensations, which are caused by the body to which it is joined, but referred to the soul itself, and which through the strong effect they have on the soul are best called 'emotions'. Here, in defining the passions, Descartes uses 'emotions' as a synonym of passions – elsewhere he reserves the term for interior or intellectual emotions which do not depend on the body (b). The motions of the animal spirits, the minute particles in the blood and neural system, which are triggered through stimulation of sense organs causing these perceptions, have special effects on the heart and the neural system, disposing the muscles and members of the body in various ways, and inclining at the same time our will to consent to the behavioral reactions to which they dispose the body. The passions of the soul differ from other confused perceptions of the outer or inner senses in the following two ways: (1) We refer them to the soul itself as volitional states depending on our own evaluations of the things taken to cause them, when in fact they are received by the soul passively as an effect of neural motions in our body which we do not perceive. (2) They agitate or move both the mind and the body more than any other perceptions, and the various physiological changes associated with them render them so confused that they belong to the thoughts we can know or understand the least. While the neural motions in the body and brain are their (temporally) last and (spatially) most proximate causes, the passions are primarily distinguished and classified through their formal or 'first' causes, which are perceptions of their objects and their importance to us (c).

Passions with their concomitant psychic and somatic effects are genuinely psycho-somatic states: the very same neural movements which cause, accompany and strengthen the passions prepare the body (a mode of extension)

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for various actions while also causing inclinations of will (modes of mind) towards the things which are useful for us (**d**). What the Scholastics explained in terms of distinct powers of faculties, Descartes, who accepts no division in the soul defined as a thinking thing, explains in terms of kinds of thoughts or modes of thinking. The soul has as many powers as it has modes of thought (**e**). Instead of deriving passions from two basic appetites, desire and anger, desire for Descartes is but one of six basic passions of which all others are composed and from which they can be derived (**f**). For Descartes's theory of emotions, see Kambouchner 1995; Alanen 2003; Shapiro 2003a, b; Brown 2006; Hatfield 2008.

2 Definitions of Particular Passions

a. Wonder is a sudden surprise of the soul which brings it to consider with attention the objects which seem to it rare and extraordinary. It is thus caused, first, by an impression in the brain, which represents the object as something rare and consequently worthy of special consideration, and second, by a movement of the spirits, disposed by this impression to flow with great force to the place in the brain where it is located so as to strengthen and preserve it there, as it also disposes them to flow from there into the muscles which serve to retain the sense organs fixed in the same orientation so that they will continue to maintain the impression, if it originated from these organs. (*Les passions de l'âme* 70, AT XI, 380–381)

b. Wonder is joined to *esteem* or *contempt*, depending on whether we wonder at the greatness of an object or at its smallness. Thus we may have esteem or contempt for ourselves; this gives rise to the passions of *magnanimity* or *pride* and *humility* or *abjectness*, and then to the corresponding habits. (*Les passions de l'âme* 54, AT XI, 373)

c. Consideration of a present good arouses *joy* in us, and that of present evil arouses *sadness*, when the good or evil is one which we regard as belonging to us ... But when we think of it as belonging to other people, we may judge them worthy or unworthy of it. When we judge them worthy, that arouses in us solely the passion of joy, in so far as it is good for us to see things happen as they should; and the joy aroused in the case of a good differs from that aroused in the case of an evil only in that the former is serious whereas the latter is accompanied by laughter and *derision*. But if we judge the others unworthy of the good or evil, the good arouses *envy* and the evil *pity*, which are species of sadness ... We may also consider the cause of a good or evil, present as well as past. A good done by ourselves gives us an *internal satisfaction*, which is the sweetest of all the passions, whereas an evil produces *repentance*, which is the most bitter. (*Les passions de l'âme* 61–63, AT XI, 376–377)

d. *Love* is an emotion of the soul caused by the movement of the spirits, which impels it to join itself by will to objects which appear to be suitable to it. And *hatred* is an emotion caused by the spirits, which impels the soul to want to be separated from objects which are presented to it as harmful. I say that these emotions are caused by the spirits not only in order to distinguish love and hatred (which are passions and depend on the body) from judgements which also bring the soul to join itself willingly to things it deems good, and to separate itself from those it deems bad, but also to distinguish them from the emotions which these judgements alone arouse in the soul. (*Les passions de l'âme* 79, AT XI, 387)

e. This same consideration of good and evil is the origin of all the other passions. But in order to put them in order I shall take time into account; and seeing that they lead us to look much more to the future than to the present or the past, I begin with desire. For it is obvious that this passion always concerns the future, not only when we desire to acquire a good which we do not yet have or to avoid an evil which we judge may occur, but also when we only wish for the preservation of a good or the absence of an evil, which are all the things this passion can extend itself to. (*Les passions de l'âme* 57, AT XI, 374–375)

f. The passion of *desire* is an agitation of the soul caused by the spirits, which disposes the soul to want, in the future, the things it represents to itself as agreeable. Thus we desire not only the presence of goods which are absent but also the preservation of those which are present, and moreover the absence of evils, both those which we already have and those we believe we might befall us on some future occasion. (*Les passions de l'âme* 86, AT XI, 392)

Passions in Descartes's theory can be generally described as complex states involving more or less clear but always confused beliefs or ideas about some present, past or future good and evil, which are prompted and upheld by mechanically triggered physiological and behavioral reactions of the body with their corresponding volitional effects. Yet the first in Descartes's list of six primitive passions, wonder (*admiration*), is an exception: it is triggered not by good or bad but by the mere novelty of the object. It is atypical because the neural movements causing and accompanying it are restricted to the brain and it involves no evaluative beliefs. It simply keeps our attention focused on the object striking us as unusual, inciting us to seek knowledge of it (**a**). It is usually followed by esteem or contempt which are genuine passions based on the importance attributed to its object (**b**). A derivative of self-esteem is Descartes's version of magnanimity which he calls 'generosity'; it is both a passion and a habit and that constitutes the highest virtue. (See below **4d**.)

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Joy and sadness are aroused by consideration of a present good or evil related to ourselves either directly or indirectly through the persons we care about. Derision, envy, and pity are various reactions to the good or evil of other people and satisfaction and repentance to considerations about ourselves as causing good or evil (c). Descartes's definitions of the four main primitive passions (joy, sadness, love, and hate) are traditional. The role given to the will in these passions is noteworthy though. Love is an act of will, whereby the lover considers herself as joined to the object loved and as forming a whole with it (d). Desire is considered a separate passion directed at the possession of some future good or the absence of future evil, and it has no contrary: the very same movement of the will disposing us to seek the good makes us avoid the evil that is its opposite, although in the first case it is accompanied by love, hope and joy, and in the latter by hatred, fear and sadness (e–f).

3 Function and Utility of the Passions

a. From what has been said it is easy to understand that the utility of all the passions consists only in their strengthening and prolonging thoughts in the soul which it is good for the soul to preserve and which otherwise might easily be erased from it. Likewise all the harm they may cause consists entirely in their strengthening and preserving these thoughts beyond what is needed, or in their strengthening and preserving others on which it is not good to dwell. (*Les passions de l'âme* 74, AT XI, 383)

b. Regarding this, it must be observed that according to the institution of nature they all relate to the body, and are only given to the soul in so far as it is united with the body. Thus their natural function is to move the soul to consent and contribute to actions which may serve to preserve the body or render it in some way more perfect. From this point of view, sadness and joy are the first two passions which are used. For the soul is immediately informed about things which harm the body only through a feeling of pain, and this produces in the soul first the passion of sadness, then hatred of what causes the pain, and finally the desire to get rid of it. Similarly the soul is immediately informed about things useful to the body only through some sort of titillation, which first arouses joy within it, then produces love of what we believe to be its cause, and finally brings about the desire to acquire something that could ensure the continuation of this joy, or else that one could enjoy later on something similar. This shows that these five passions are all very useful with respect to the body, and even that sadness is in some way primary and more necessary than joy, and hatred more than love; for it is more important to repel things which are

harmful and could be destructive than to acquire those which add some perfection without which we can live. (*Les passions de l'âme* 137, AT XI, 430)

c. As for desire, it is obvious that when it proceeds from true knowledge, it cannot be bad, provided it is not excessive and that it is governed by this knowledge. It is obvious too that joy cannot fail to be good, nor sadness bad, with regard to the soul. For it is in the latter that all the discomfort which the soul receives from evil wholly consists, and the enjoyment of the good belonging to the soul consists wholly in the former. Thus, if we had no body, I would venture to say we could not go too far in abandoning ourselves to love and joy, or in avoiding hatred and sadness. But the bodily movements accompanying these passions may all be harmful to health when they are very violent; on the other hand, they may be beneficial to it when they are merely moderate. (*Les passions de l'âme* 141, AT XI, 434)

Descartes thinks that the passions are basically useful motivators and supporters of action, but they may cause problems through strengthening and preserving thoughts on which it is not good to dwell (**a**). In evaluating the passions he distinguishes the point of view of the soul and that of the body. In the latter case sadness and hatred can be more useful than joy and love (**b**), whereas from the point of view of the soul, love and joy cannot fail to be good, and can never be excessive in themselves, that 'even a false joy is often more valuable than a sadness whose cause is true' (*Les passions de l'âme* 142, AT XI, 434–435) (**c**).

4 Conflicts of the Soul and Control of Passions

a. All the battles usually imagined to take place between the lower part of the soul, which we call 'sensitive', and the higher or 'rational' part of the soul, or between the natural appetites and the will, consist simply in the opposition between the movements which the body (by means of its spirits) and the soul (by means of its will) tend to produce at the same time in the gland ... It is to the body alone that we should attribute everything that can be observed in us to oppose our reason. So there is no battle here except in so far as the little gland in the middle of the brain can be pushed to one side by the soul and to the other side by the animal spirits... and these two impulses often happen to be opposed, the stronger cancelling the effect of the weaker ... We experience this when an object which excites fear also causes the spirits to go to the muscles which serve to move our legs in flight, whereas the will to be courageous stops them ... when fear represents death as an extreme evil which can be avoided only by flight, while ambition on the other hand represents the dishonour of flight as an evil worse than death, these two passions push the will in opposite ways; and since the will obeys first the one and then the other, it is continually

opposed to itself, and so it makes the soul enslaved and miserable. (*Les passions de l'âme* 47–48, AT XI, 368)

b. But the will is by its nature so free that it can never be constrained. I have distinguished in the soul the two kinds of thought, first its actions, i.e. its volitions, and secondly its passions, taking this word in its most general sense to include every kind of perception. The former are absolutely within its power and can be changed only indirectly by the body, whereas the latter are absolutely dependent on the actions which produce them, and can be changed by the soul only indirectly, except when it is itself their cause. And the activity of the soul consists entirely in the fact that simply by willing something it brings it about that the little gland to which it is closely joined moves in the manner required to produce the effect corresponding to this volition. (*Les passions de l'âme* 41, AT XI, 359–360)

c. It is useful to know that, as already mentioned above, although nature seems to have joined every movement of the gland to each one of our thoughts from the beginning of our life, yet we may join them to others through habit. Experience shows this in the case of language... It is also useful to know that although the movements (both of the gland and of the spirits and the brain) which represent certain objects to the soul are naturally joined to the movements which produce certain passions, yet through habit they can be separated from these and joined to others which are very different ... the same may be observed in animals ... For since we are able, with a little skill, to change the movements of the brain in animals without reason, it is evident that we can do so still better in the case of humans. Even those who have the weakest souls can acquire absolute mastery over all their passions if we employed sufficient ingenuity in training and guiding them. (*Les passions de l'âme* 50, AT XI, 368–570)

d. Here I shall merely add one more consideration which, it seems to me, serves very well to prevent us from suffering any discomfort from the passions. It is that our good and our evil depend principally on internal emotions which are produced in the soul only by the soul itself. In this respect they differ from its passions, which always depend on some movement of the spirits. Although these emotions of the soul are often joined with the passions which are similar to them, they frequently occur with others, and they may even originate in those to which they are opposed ... And when we read of strange adventures in a book, or see them acted out on the stage, this sometimes arouses sadness in us, sometimes joy, or love, or hatred, and generally any of the passions, depending on the diversity of the objects which are presented to our imagination. But we also have pleasure in feeling them aroused in us, and this pleasure is an intellectual joy which may as readily originate in sadness as in any of the other passions. (*Les passions de l'âme* 147, AT XI, 440–441)

e. These two passions [esteem and contempt] may relate to all sorts of objects. But they are chiefly noteworthy when we refer them to ourselves, i.e. when it is our own merit for which we have esteem or contempt. The movement of the spirits which causes them in this case is so manifest that it changes even the appearance, gestures, gait and, generally, all the actions of those who conceive a better or worse opinion

of themselves than what they usually have ... I see only one thing in us which could give us good reason for esteeming ourselves, namely, the exercise of our free will and the power we have over our volitions. For we can reasonably be praised or blamed only for actions which depend upon this free will. It makes us in a certain way like God by making us masters of ourselves, provided that we do not lose the rights it gives us through cowardice. (*Les passions de l'âme* 151–152, AT XI, 444–445)

f. But just as pride more than anything else makes anger excessive, so I think that generosity is the best remedy one can find against its excesses; it causes us to hold in low esteem all the good things which may be taken away, and on the other hand to hold in high esteem the liberty and absolute dominion over ourselves which we cease to have when someone else is able to injure us. Thus it causes us to have nothing but contempt, or at the most indignation, for the wrongs at which others usually take offence. (*Les passions de l'âme* 203, AT XI, 483)

g. ...[W]hen one perceives one's blood moved in this way, one should take note and remember that everything presented to the imagination tends to deceive the soul and to make the reasons for favouring the object of passions seem much stronger than they are and those dissuading much weaker. And when the passion persuades us merely of things which admit some delay, one must abstain from making any judgement about them immediately and distract oneself by thinking about other things, until time and rest have completely calmed down the passion in the blood. (*Les passions de l'âme* 211, AT XI, 487)

h. For the rest, the soul can have pleasures of its own, but those that it shares with the body depend entirely on the passions, so that persons whom the passions can move most deeply are capable of enjoying the sweetest pleasures of this life. It is true that they may also experience the most bitterness when they do not know how to put these passions to good use and when fortune works against them. But wisdom is mainly useful in teaching us to master them so well and to control them with such skill that the evils which they cause are quite bearable, and even become a source of some joy. (*Les passions de l'âme* 212, AT XI, 488)

Descartes opposes the ancient distinction between parts of the soul and explains conflicts of soul by the opposition of motions in the pineal gland and volitional inclinations of the soul. There are no separate parts within the soul fighting each other, the impression of an internal conflict being due to a rapid succession of opposite inclinations caused, on the one hand, by the motions in body and, on the other, by the soul's rational thoughts and volitions. Descartes differs from the Stoics who held a similar view of mental conflicts and who also defended a monistic conception of the soul (see pp. 19 and 51 above), mainly through his mind-body dualism and mechanistic account of the physiological and neural causes and effects of the passions (**a**). Descartes

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also goes beyond the Stoics in emphasising the role of the will and its unconditioned power of free decision in the mastery of passions. The radical doctrine of free assent (with roots in the voluntarist tradition, see pp. 561–565 below) is backed up by a physiological theory of how the actions and passions of the mind are associated with motions in the famous pineal gland, through which the mind can act and be acted on by bodily motions (**b**). Descartes held that the soul's power over the body and body-dependent thoughts is indirect (*Passions* 45, AT XI, 364) and depends on the 'natural institution' of mind and body, whereby certain actions (motions) in the body have been joined to thoughts in the mind. He believed optimistically that what nature and habit has joined can, through exercise and practice, be separated, so that associations of thought strengthening harmful or exaggerated passions can be replaced by edifying thoughts counteracting and moderating the passions. By focusing on other things and occupations, thus diverting one's attention from the objects of passion, the course of the spirits in the body can be changed (**c**). The physiological mechanisms of the passions, however, make them hard to control, especially since the special movements or 'disturbances' causing and accompanying them continue to keep their objects present to mind so long as these motions, by an inertia of their own, continue in the body (*Passions* 212, AT XI, 488).

Descartes also regards emotions as internal and depending on the soul alone. This view shows some similarity to the Stoic conception of emotions as non-necessary cultural habits. The internal emotions can be developed into virtuous habits, the exercise of which provides a supreme remedy for immoderate passions. Descartes holds that all passions can be good when moderated, but they are harmful to the extent that they involve false beliefs about the value and importance of their objects. In addition to the internal emotions caused by true rational judgements, there are secondary inner emotions, for instance, when the mind delights in being moved by (primary) passions which it can somehow control, as is the case when one steps back and looks at events in one's life as a spectator rather than actor, or, more typically, when one enjoys novels or dramas on the stage (**d**). Justified self-esteem, which Descartes calls 'generosity', is of special importance here, being both a passion and the highest virtue. As a passion it is accompanied by bodily motions which prolong its effects, it is therefore the most powerful tool in moderating harmful and excessive passions (**e–f**). (Cf. *Passions* 153, AT XI, 446). In his therapy of the passions, Descartes may be seen as following the originally Stoic doctrine of first movements and mastering them by changing attention (**g**), but he rejects the Stoic program of rendering oneself insensible to events causing emotional disturbance and of trying to eradicate the passions. Instead, he considers all passions as good and enjoyable in themselves as long as we do not let them overpower us (**h**).

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Descartes's problematic account of mind-body interaction and the controversial thesis of an undetermined will, upon which his optimistic view of the mind's power to control the passions is based, were much criticised by those of his successors who rejected dualism, not least, Spinoza and Leibniz who endorsed a consistent view of a deterministic universe and downplayed the role of individual selves equipped with the power of an independent will to oppose irrational passions. It is noteworthy that a draft version of Descartes's treatise on the *Passions* was written on the request of Princess Elisabeth of Bohemia, who was not only its first but also one of its sharpest critics. For the correspondence with Elisabeth, see Shapiro 2007.

5 Emotions in Malebranche's *De la recherche de vérité*

a. The human will as will depends essentially of the love which God has for himself and the eternal law, in one word, of God's will. It is only because God loves himself that we love anything... for the will is nothing but the impression of nature which impels us towards the good in general... But the will, as the will of a human being, depends essentially of the body; for it is only because of the movements in the blood, or rather, the animal spirits, that it feels agitated by all the sensible emotions. I have thus called *natural inclinations* all the movements of the soul which we share with the pure intellects ... and I here call *passions* all the emotions which the soul has naturally on occasion of the particular movements of the animal spirits. (*De la recherche de la vérité* V.1 (77–78))

b. The passions of the soul are the impressions from the Author of the nature, which incline us to love our body and everything that can be useful for its preservation; just as the natural inclinations are the impressions from the Author of nature, which bring us mainly to love him as our highest good and our neighbor, without relation to our body. (*De la recherche de la vérité* V.1 (78))

c. Self-love involves...two loves: love of greatness, power, independence, and generally of all the things which seem to serve the conservation of our being; and love of pleasure and all the things which are necessary for well-being, that is, for being happy and content. (*De la recherche de la vérité* IV.5.1 (25))

d. We are in some manner united to the whole universe, and it is the sin of the first man which has made us dependent on all the beings to which God had only united us. Thus there is no person presently who would not be in some manner united and subjected to the whole formed by his body, and through his body to his parents, his friends, his city, his prince, his country, his cloths, his house, his land, his horse,

his dog, the whole earth, the sun, the stars and all the heavens (*De la recherche de la verité* V.2 (82))

e. Thus we are united by our passions to everything that appears good or evil for the mind as well as to everything that appears to be good or bad of the body. There is nothing that we could know to have some relation to us that could not agitate us; and of all the things we know, there is none that would not have some relation to us ... Thus the passions have a power so wide and extended that it is impossible to conceive anything with respect to which one could ascertain that all men would be exempt from their rule. (*De la recherche de la verité* V.2 (87))

f. These motions of the soul are not different from those which follow immediately upon the intellectual perception of the good ... they are only stronger and livelier because of the union of the mind and body, and because the perception producing them is sensible ... Similarly the sixth element of the passions, the feeling of love, aversion, desire, joy or distress, is not different from the one mentioned earlier; it is only livelier because of the greater role of the body in it. (*De la recherche de la verité* V.3 (97))

g. The movement of hatred is the same as that of love, but the feeling of hatred is quite different from that of love, as everyone knows by one's own experience. The movements are the actions of the will; the sentiments are modifications of the mind. The movements of the will are the natural causes of the feelings of the mind, and these feelings of the mind in turn support the movements of the will in their determination. The feeling of hatred in this man is a natural consequence of the movement of his will excited by the perception of evil, and this movement is then entertained by the sentiment of which it is the cause. (*De la recherche de la verité* V.3 (91))

h. The things which we have explained of the passions in general are not free; they are in us independently of us, and it is only the assent of our will that depends entirely on us. The perception of the good is naturally followed by the motion of love, by the feeling of love, by the turmoil of the brain and the motions of the spirits, by a new emotion in the soul which increases the first motion of love, and finally by a feeling of sweetness that gratifies the soul because the body is in the state it should be in ... It is this consent that one has to regulate and that has to be kept free, in spite of all the efforts of the passions. It is to God alone that one must submit one's freedom; one should yield nothing but the voice of the author of nature, to the internal evidence, to the secret reproaches of one's reason. One should not assent without seeing clearly that one would make a bad use of one's will if one did not want to assent; that is the main rule one must follow to avoid error and sin. (*De la recherche de la verité* V.4 (99))

i. It is to be carefully noted here that the soul has no part in all this play of the machine, and that it is uniquely the natural and necessary effect of the wise and admirable construction of our bodies. For God, in his wisdom has put in it all the springs, or all the principles of action required for their conservation. (*De la recherche de la verité* V.3 (92–93))

Passions for Malebranche are essentially modifications of the will, which is a natural inclination impressed on the soul by the author of its nature toward the general good, i.e., of God's love for himself. Since the human soul is united to the body, this general inclination for the good depends for its particular motions on the movements of the animal spirits in the body, which serve as their particular occasional causes and are prompted by particular sensible or imagined objects. The inclinations depending on the body make us love everything that appears to be useful for it, while the natural inclinations of the soul bring us to love the good and other human beings for their own sake without regard to what is useful (**a**). All passions are derived from the natural inclination impressed by God, which takes three main forms: first, a principal inclination for the general good which is always active and never satisfied by any particular finite good; second, an inclination for the conservation of our being, which itself is divided in two kinds: love of being and of well-being. They are two variants of self-love and take various forms depending on whether the passion is considered from the point of view of the mind and its good, which is the highest good, or the point of view of the body, in which case its object can be anything deemed useful for its conservation (**b**). While we are naturally united through our passions to all things in nature, we have become enslaved to them through the original sin, and only the grace of God can free us from their rule (**c–d**).

Malebranche adapts and elaborates on Descartes's psychophysiology of passions: the increasing agitation of the motions of spirits in the brain in sense-perception, which renders the perception of the good more vivid, also increases the force of the passion (**e**). He offers a more detailed analysis of the whole complex psychophysical process constituting the passions, a process he divides into seven stages or moments: (1) a more or less confuse or distinct perception of the relation of a particular object or person to us, such as the thought that one has been benefited or harmed by someone; (2) an actual determination of the will towards this object if it appears as good, or away from it if it appears as evil; (3) specific feelings (*sentiments*) varying with the particular emotions, for example love, hatred, desire, aversion, which accompany these movements of the will (**f**); (4) associated specific determinations of the (physical) movements of the spirits towards the external and internal parts of the body, producing the appropriate disposition in the body and its countenance for pursuing or avoiding the object; (5) a 'sensible emotion' of the soul experiencing the turmoil and the changes in the body (reciprocally, the soul may cause or 'occasion' similar agitations in the body by intellectual perceptions of the good); (6) various sensible sentiments of love, hatred, joy, desire, and sorrow caused by this and directly caused ('occasioned') by the movements of the spirits in the brain, more violent than the volitions or determinations of the will mentioned above in (3) from which they originate

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and which they reinforce; and, finally (7) an interior sentiment of delight which ties the soul to the emotion, testifying that the body is in the state proper to confront the object considered (g). This whole process is mechanical, not free, for nothing except the assent (*consentment*) of the will to the emotion thus generated depends upon us (h). Malebranche, who follows Augustine in thinking that we are enslaved under passions as a consequence of the Fall, does not believe as Descartes did in our own or reason's power to master the passions without the help of God's grace (i). For Malebranche's view of emotions, see also James 1997; Schmitter 2010, 2012.

6 Hobbes on Emotions

a. This motion, in which consisteth pleasure or pain, is also a solicitation or provocation either to draw near to the thing that pleaseth, or to retire from the thing that displeaseth. And this solicitation is the endeavour or internal beginning of animal motion, which when the object delighteth, is called APPETITE; when it displeaseth, it is called AVERSION, in respect of the displeasure present; but in respect of the displeasure expected, FEAR. So that pleasure, love, and appetite, which is also called desire, are divers names for divers considerations of the same thing. (*Elements of Law* 7.2; cf. *Leviathan* I. 24)

b. There are two sorts of pleasure, whereof the one seemeth to affect the corporeal organ of sense, and that I call SENSUAL; the greatest whereof is that, by which we are invited to give continuance to our species; and the next, by which a man is invited to meat, for the preservation of his individual person. The other sort of delight is not particular to any part of the body, and is called the delight of the mind, and is that which we call JOY. Likewise of pains, some affect the body, and are therefore called the pains of the body, and some not, and those are called GRIEF. (*Elements of Law* 7.9)

c. Seeing all *delight* is *appetite*, and presupposes a *further* end, there can *no contentment* but in *proceeding*; and therefore we are not to marvel, when we see, that as men attain to more riches, honour, or other power; so their appetite continually growth, and when they are come to the utmost degree of some kind of power, they pursue some other, as long as in any kind they think themselves behind any other ... (*Elements of Law* 7.7)

d. And because the constitution of a man's body is in continual mutation, it is impossible that all the same things should always cause in him the same appetites, and aversions: much less can all men consent, in the desire of almost any one and the same object. (*Leviathan* I.6 (contempt))

e. But whatsoever is the object of any man's appetite or desire, that is it which he for his part calleth *good*: and the object of his hate and aversion, *evil*, and of his contempt, *vile* and *inconsiderable*. For these words of good, evil and contemptible, are ever used with relation to the person that useth them: there being nothing simply and absolutely so. (*Leviathan* I.6 (good, evil))

f. Forasmuch as will to do is appetite, and will to omit, fear; the causes of appetite and of fear are the causes also of our will. But the propounding of benefits and of harms, that is to say, of reward and punishment, is the cause of our appetite and of our fears, and therefore also of our wills, so far forth as we believe that such rewards and benefits, as are propounded, shall arrive unto us. And consequently, our wills follow our opinions, as our actions follow our wills. In which sense they say truly and properly that say the world is governed by opinion. (*Elements of Law* 12.6)

g. GLORY, or internal gloriation or triumph of the mind, is that passion which proceedeth from the imagination or conception of our own power, above the power of him that contendeth with us. The signs whereof, besides those in the countenance, and other gestures of the body which cannot be described, are, ostentation in words, and insolency in actions; and this passion, by them whom it displeaseth, is called pride: by them whom it pleaseth, it is termed a just valuation of himself. This imagination of our power and worth, may be an assured and certain experience of our own actions, and then is that glorying just and well grounded, and begetteth an opinion of increasing the same by other actions to follow; in which consisteth the appetite which we call ASPIRING, or proceeding from one degree of power to another. The same passion may proceed not from any conscience of our own actions, but from fame and trust of others, whereby one may think well of himself, and yet be deceived; and this is FALSE GLORY, and the aspiring consequent thereto procureth ill-success. Farther, the fiction (which also is imagination) of actions done by ourselves, which never were done, is glorying; but because it begetteth no appetite nor endeavour to any further attempt, it is merely vain and unprofitable; as when a man imagineth himself to do the actions whereof he readeth in some romane, or to be like unto some other man whose acts he admireth. And this is called VAIN GLORY: and is exemplified in the fable by the fly sitting on the axletree, and saying to himself, What a dust do I raise! ...Signs of vain glory in the gesture, are imitation of others, counterfeiting attention to things they understand not, affectation of fashions, captation of honour from their dreams, and other little stories of themselves, from their country, from their names, and the like. (*Elements of Law* 9.1)

h. The signs by which we know our own power are those actions which proceed from the same; and the signs by which other men know it, are such actions, gesture, countenance and speech, as usually such powers produce: and the acknowledgment of power is called HONOUR; and to honour a man (inwardly in the mind) is to conceive or acknowledge, that that man hath the odds or excess of power above him that contendeth or compareth himself. (*Elements of Law* 8.5)

i. It happeneth sometimes, that he that hath a good opinion of himself, and upon good ground, may nevertheless, by reason of the forwardness which that passion begetteth, discover in himself some defect or infirmity, the remembrance whereof dejecteth him; and this passion is called SHAME, by which being cooled and checked in his forwardness, he is more wary for the time to come. This passion, as it is a sign of infirmity, which is dishonour; so also it is a sign of knowledge, which is honour. The sign of it is blushing, which happeneth less in men conscious of their own defects, because they less betray the infirmities they acknowledge. (*Elements of Law* 9.3)

j. Of love, by which is understood the joy a man taketh in the fruition of any present good, hath been already spoken in the first section of the seventh chapter, under which is contained the love men bear to one another, or pleasure they take in one another's company; and by which men are said to be sociable by nature. But there is another kind of LOVE, which the Greeks call Eros, and is that which we mean, when we say: that man or woman is in love. For as much as this passion cannot be without diversity of sex, it cannot be denied but that it participateth of that indefinite love mentioned in the former section. But there is a great difference between the desire of a man indefinite, and the same desire limited ad hanc; and this is that love which is the great theme of poets. (*Elements of Law* 9.16)

k. There is yet another passion sometimes called love, but more properly good will or CHARITY. There can be no greater argument to a man of his own power, than to find himself able, not only to accomplish his own desires, but also to assist other men in theirs: and this is that conception wherein consisteth charity. In which, first, is contained that natural affection of parents to their children, which the Greeks call Storgi, as also that affection wherewith men seek to assist those that adhere unto them. But the affection wherewith men many times bestow their benefits on strangers, is not to be called charity, but either contract, whereby they seek to purchase friendship; or fear, which maketh them to purchase peace. (*Elements of Law* 9.17)

Hobbes's theory is the first consistently materialist account of emotions or passions. When he speaks of movements of the will, this is to be taken literally as movements in the brain and bodily organs. Hobbes distinguishes in the *Leviathan* between the vital movement of the inner vital organs and the animal movement proceeding to the muscles and limbs. The cognitive aspect of emotions is reduced to the cerebral movements of perception or imagination which continue to the heart and act on the vital movement in the blood by helping or hindering it. In the first case this movement is pleasure,

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in the second pain, and these in their turn cause the first beginning of animal movements (speaking, walking, moving) which Hobbes calls endeavour (*Leviathan* VI.13). So endeavour (*conatus*) is a reactive outward movement of the animal spirits originating from pressure on the sensory organs. When this movement is transplanted from the brain to the heart, it causes a reactive movement in the flow of blood, which is registered as pleasure or pain and followed by a corresponding endeavour to prolong or overcome it. Passions consisting in these first inner movements are variations of endeavour, which is called appetite or desire when it tends to what pleases, and aversion when it shuns pain or trouble (**a**). The pleasant movement is sensual pleasure, when it is related to some particular corporeal organ, and joy when it is not related to any particular part of the body (**b**). Desire has no ultimate or highest end of action, but always presupposes some further end (**c**). Since the constitution of the body is continuously changing as it is acted upon and reacts to movements of other bodies, the things one takes pleasure in vary too in innumerable ways according to how the objects imagined happen to affect our vital movements (**d**). Passions are consequently countless and we name only a few we notice and classify on the basis of the images or conceptions from which they proceed. Thus, in desire we imagine a pleasing object which is absent and in love the presence of that same object. By aversion we mean the absence of an object we hate, and by hate, its presence. Our appetites or desires determine what each of us consider as good or evil, there being nothing absolutely good or evil (**e**).

While animal movements are voluntary, the passions from which they originate are not. Our endeavour or appetite is our will which depends on what we imagine or believe to be pleasing or fearful and, ultimately, on how our vital movements are helped or hindered (**f**). Human life being like a race with no other goal than 'being foremost', Hobbes devotes a Chapter of the *Elements of Law* to passions connected with our own power and social relations, like glory, honour, emulation, and their derivatives (**g-i**). Love, the enjoyment of a present good, comes in different kinds, and includes friendship and the enjoyment of the company of other humans; this is a social emotion (**j-k**).

Hobbes sees no problem with the relation between thoughts or beliefs and bodily movements since the former are nothing but brain movements in his theory. Although Hobbes's straightforward naturalism and speculative mechanistic psychology were problematic in many ways, his account of the conative powers including the emotions and its egoistic moral and political theory were very influential. The influence of Hobbes is obvious both among so-called rationalists such as Spinoza and Leibniz and their followers, and in British empiricism, not least upon Hume's theory. For Hobbes's theory of emotions, see James 1997.

7 Spinoza on Active and Passive Affects

a. Therefore the affects of hate, anger, envy, etc., considered in themselves, follow from the same necessity and force of nature as the other particular things. And therefore they acknowledge certain causes, through which they are understood, and have certain properties, as worthy of our knowledge as the properties of any other thing, the mere contemplation of which delights us. Therefore, I shall treat the nature and force of the affects, and the power of the mind over them, by the same method by which, in the previous parts, I treated God and the mind, and I shall consider human actions and appetites just as if I were dealing with lines, planes, and bodies. (*Ethica* III, preface (138))

b. An affect called a passion of the soul is a confused idea whereby the mind affirms a greater or lesser force of existence of its body or of any part of it than before, and by the occurrence of which the mind is determined to think one thing rather than another. (*Ethica* III, general definition of emotions (204))

c. This striving, when it is related to the mind alone, is called will; but when it is related to mind and body at the same time, it is called appetite, which therefore is nothing else than the essence of man, from the nature of which all things which can help its preservation necessarily follow, and therefore man is determined to act in this way. Hence, there is no difference between appetite and desire except that desire is usually related to men in so far as they are conscious of their appetite ... It is clear from all this that we do not strive, will, seek or desire because we deem a thing good; on the contrary, we deem something good because we strive, will, seek or desire it ... (*Ethica* III, prop. 9 (147–148))

d. By good I understand here every kind of joy and also whatever leads to it, and especially what satisfies any desire, whatever it may be, and by evil every kind of sadness, and especially what frustrates desire. For we have shown above (III, prop. 9 schol.) that we desire nothing because we judge it to be good, but on the contrary, we judge it to be good because we desire it. Consequently, what we are averse to we call evil. So each one judges or evaluates according to his affect what is good and what is bad, better or worse, and best or worst. Thus for a miser an abundance of money is best, and poverty worst. An ambitious man desires nothing so much as honour and dreads nothing as much as shame. To an envious man nothing is more pleasing than another's unhappiness, and nothing more displeasing than another's happiness. (*Ethica* III, prop. 39 schol. (G 170))

e. We see that the mind can undergo great changes, and can pass now to a greater or lesser perfection. These passions explain to us the affects of joy and sadness. By joy, therefore, I shall understand in what follows the passion by which the mind passes to a greater perfection and by sadness the passion by which it passes to a lower perfection. The affect of joy which is related simultaneously to the mind and body I call pleasure or cheerfulness, and that of sadness, pain or melancholy. (*Ethica* III, prop. 11 (149))

f. Love is nothing but joy with the accompanying idea of an external cause and hate is nothing but sadness with the accompanying idea of an external cause. We see, then, that one who loves necessarily strives to have present and preserve the thing he loves; on the other hand, one who hates strives to remove and destroy the thing he hates. (*Ethica* III, prop. 13 schol. (151))

g. He who affects a thing we love with joy or sadness, likewise affects us with joy or sadness, if we imagine that the thing loved is affected with joy or sadness (by the previous proposition). But this joy or sadness is supposed to be accompanied in us by the idea of an external cause. Therefore (by the scholium of proposition 13), if we imagine anyone we love to be affected with joy or sadness by someone, we shall be affected with love or hatred toward him (*Ethica* III, prop. 22 dem. (157))

h. By the striving to persist in one's being, in so far as it is related to the mind and body together, we understand appetite and desire (III, prop.9 schol.) So joy and sadness are the desire or appetite itself, in so far as it is increased or diminished or aided or restrained by external causes, that is (by the same scholium), it is each individual's very nature. And so the joy or sadness of one differs from the joy or sadness of another as much as the nature or essence of one differs from the nature or essence of another. Consequently, each affect of each individual etc., q.e.d. (*Ethica* III, prop. 57 (187))

i. If we imagine a thing similar to ourselves to be affected with some affect, we are thereby affected with a like affect ... This imitation of the affects, when it is related to sadness, is called *pity*, but when it is related to desire it is called *emulation*, which therefore is nothing but the desire for a thing which is generated in us from the fact that we imagine others like us to have the same desire ... This will or appetite to do good, which arises from our pity for the thing on which we wish to do good, is called *benevolence*, which is therefore nothing but desire arisen from pity. (*Ethica* III, prop. 27 schol. (160))

Nature in Spinoza's system is an infinite dynamic plenum or field of forces; finite things are determinate expressions of its infinite power. Every individual is endowed with its share of power or force by means of which it strives to preserve itself in being (*Ethics* III. prop. 6 dem.). This power which Spinoza calls *conatus* (striving) constitutes its actual essence or being (*Ethics* III, prop. 7 dem. 9). The principle that each thing (whether considered as a mind or body) strives towards self-preservation is also the basis of Spinoza's naturalistic psychology and ethics which follow the same laws as the rest of nature (**a**).

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Emotional passions are defined as passive affects, a subclass of affections or impressions which are defined as confused ideas, and they are caused by external things acting on the body, either concurring with its own power or opposing it. Passions are thus essentially dynamic, transitional processes, whereby a mind (and body) passes from a given state to a state of increased or weakened power of self-preservation. These processes determine its desires, thoughts and actions accordingly (**b**). What we regard as good or bad depends on how we are affected, not the other way around. Because a person's appetites, desires and volitions vary as her constitution varies, they are often 'so opposed to one another that the man is pulled in different directions and knows not where to turn' (*Ethics* III, definitions of affects) (**c–d**). Joy, a transitional state by which the mind's perfection is increasing, and sadness, a transitional state by which its perfection is decreasing, together with conscious desire, are the three primary passions from which all others arise. In fact, joy and sadness are transitional states of the appetite making us conscious of it: in the case of joy, as a desire to preserve this state, turning our thoughts to things and actions which would help us to achieve the desired effect. Pleasure (*titillatio*) and pain (*dolor*) are always related to local changes in the bodily constitution, whereas cheerfulness (*laetitia*) or sadness (*tristitia*) relate to changes affecting the whole body. Joy and sadness are the main variations of our desire, which constitutes our very nature (**e**). See also *Ethics* III, prop. 57.

The main ground of classification for Spinoza is the object of desire, whether it is external, as in love (*amor*), defined as joy (an increase of our power) accompanied by an external cause, or internal, as in pride (*superbia*), which is joy accompanied by the idea of oneself as its source. Other classificatory criteria include whether the object relates to a part of the body (pleasure or pain) or to the whole body (cheerfulness or sadness); whether it is past present or future; and whether it is like us or fundamentally different (*Ethics* III, prop. 27). In the genesis of all these passions, a central role is played by imagination, which is a succession of incomplete and confused ideas of affections with their accidental associations caused by mechanical bodily affections (**f–g**). The passions and various vacillations arising from the combinations of the three primitive affects, desire, joy, and sadness, are innumerable, as are the fluctuations of forces in nature acting on each other, and they vary in kind and intensity with one's constitution and actual states as well being affected by the particular circumstances of other individual beings (**h–i**). For Spinoza's view of emotions, see Curley 1988, James 1997; Lebuffe 2009; Perler 2011, 355–422, Alanen 2012; Alanen forthcoming.

8 Spinoza on Freedom from Passions

a. Among all the affects which are related to the mind insofar as it acts, there are none which are not related to joy or desire ... All actions which follow from affects related to the mind, in so far as it understands, I relate to strength of mind, which I divide into tenacity and generosity. For by tenacity I understand the desire by which each strives to preserve what is his own, from the dictate of reason alone. By generosity I understand the desire by which each strives, solely from the dictate of reason, to aid other men and join them to him in friendship. (*Ethica* III, prop. 59 (188))

b. Therefore a man who is guided by reason desires, in order to live with more freedom, to keep the common laws of the state, q.e.d. ... a strong man hates no one, is angry with no one, envies no one, is indignant with no one, despises no one, and is not at all proud ... and considers this most of all that all things follow from the necessity of divine nature, and accordingly, that whatever he regards as troublesome and evil, and moreover, whatever seems impious, dreadful, unjust, and disgraceful, arises from the fact that he conceives the things themselves in a way that is disordered, mutilated and confused. For this reason, he strives most of all to conceive things as they are in themselves, and to remove obstacles from true knowledge, as, for example, hatred, anger, envy, derision, pride, and other things of this kind we have noted in the preceding pages. (*Ethica* IV, prop. 73 schol. (265))

c. An affect which is a passion ceases to be a passion as soon as we form a clear and distinct idea of it ... So the more an affect is known to us, the more it is in our control and the less the mind is suffering from it. (*Ethica* V, prop. 3 cor. (282))

d. Everyone has the power to understand himself and his affects clearly and distinctly, if not absolutely, at least in part, and consequently to bring it about that he should suffer less from them. Thus we should especially learn to know clearly and distinctly each affect, as far as possible, so that the mind may be determined from that affect to think of what it clearly and distinctly perceives and which it entirely enjoys; and thus the affect itself may be separated from the thought of an external cause and joined to true thoughts. Hereby not only love and hatred will be destroyed ... but also no appetite or desire bound to arise from such affects will be excessive ... For it is important to note that it is one and the same appetite through which a man is said to be active and passive. For example, human nature, as we have shown, is so disposed that everyone wants others to live according to his mind ... which appetite, when not guided by reason, is a passion called ambition and does not differ much from pride; while in a man who is guided by reason it is an activity or virtue which is called piety ... In this way all the appetites or desires are passions only in so far as they arise from inadequate ideas, and they are ascribed to virtue when they are aroused and generated by adequate ideas. For all desires determining us to some action can originate from adequate as well as from inadequate ideas ... There is no better remedy depending on our power for the affects than that which consists in a true cognition of them, since there is no other power of mind than the power of thinking and forming adequate ideas, as we have shown above. (*Ethica* V, prop. 4 schol. (283))

The human mind, for Spinoza, is a finite instantiation of God's or Nature's infinite power of thought and thus has the resources for adequate, rational thinking in spite of the fact that it is subjected to externally caused passions. As thinking, it desires nothing but persevering in thinking and understanding. Adequate thinking is, for Spinoza, the same as acting – the only activity of the mind which is not dependent on or determined by external causes it cannot control. Being active is accompanied by joy and thus increases one's power to persevere. The road to freedom from bondage by external passions is to perfect one's reason and capacity for adequate thinking, for understanding the causes and mechanisms of passions lessens their hold on us (*Ethics* IV, app. 2–4). Adequate thinking, moreover, comes with joy and love for its object, that is, God or nature, and hence of ourselves and our foibles as parts of nature. This joy can never be excessive and generates adequate ideas and consequently joy. Since joy and love concur with our mind's own power, they build what Spinoza calls strength of character, the highest virtue. This takes two forms: when it is directed at one's own advantage exclusively, it is called tenacity, and when it aims at other people's advantage, generosity. Moderation, sobriety and courage are species of tenacity; courtesy, mercy and benevolence are species of generosity (a–b). In so far as affects are states of the body, they can be clearly and distinctly known, at least in principle. Spinoza is fairly optimistic that they can be controlled by reason by simply dissociating the affect from the idea of its cause. But given the mechanisms producing the passions, as he describes them, it is fairly obscure how this could work, especially given that so much of our thinking is driven by passions. Mere adequate thinking and knowledge of their mechanisms, because of the joy which sheer understanding brings, is supposed to transform passions and the excessive desires they generate into virtues and virtuous actions (c–d). For Spinoza's difficult road to salvation through understanding, see Part V of *Ethics*.

9 German Enlightenment: Thomasius and Leibniz

a. I can fully apply the general description of the inclinations of mind to desire, but I can also say about all affects that they are desires. Of the four affects mentioned as examples above, love is a desire to possess a thing loved, hate is a desire to keep away a thing hated, fear is a desire to avoid an evil thing and hope is a desire to get a good thing ... For this reason we have used desire as a generic concept for the inclinations of mind in the descriptions of rational and irrational love. (Christian Thomasius, *Ausübung der Sittenlehre* IV.4 (108–109))

b. It follows that all inclinations of the mind aim at future good or evil things, not at present or past things... therefore it is obvious that pleasure and pain, which Peripatetic philosophers correctly say to accompany affects and be related to them,

are without a ground regarded as some kind of inclinations of the mind by some of them as well as by the Stoics and the followers of Epicurus. For pleasure and joy or pain and distress are nothing else than enjoyments or feelings about present good or evil things. (Christian Thomasius, *Ausübung der Sittenlehre* III.35, 37 (88–89))

c. All our non-deliberated actions result from the joint effect of minute perceptions; and so do even our customs and passions, which so much influence our deliberations; for these habits are formed gradually, and consequently, without the minute perceptions we would not have acquired these noticeable dispositions. I have already remarked that anyone who denied these effects in morals would follow those ignorant people who deny insensible corpuscles in physics, and yet I notice that among those who speak of liberty there are some who, not paying attention to these insensible impressions which can suffice to tilt the balance, fancy a complete indifference in moral actions like that of Buridan's ass between two pastures. I admit however that these impressions tilt the balance without necessitating. (Leibniz, *Nouveaux essais sur l'entendement humain* (II.1.15 (115–116))

d. The Stoics took the passions to be opinions ... But I prefer to say that passions are neither contentments, or displeasures, nor opinions, but tendencies, or rather modifications of the tendency which follow from opinion or sentiment and are accompanied by pleasure and displeasure. (Leibniz, *Nouveaux essais* II.20.8 (67))

e. We can say that we are free from slavery as long as we act with distinct cognition and that we are slaves of passions as long as our perceptions are confused ... And what is effected by bonds and coercion in a slave is effected in us by the passions; their coercion is sweet, but nevertheless harmful. (Leibniz, *Theodicée* III. (289))

f. As to the struggles supposed to take place between the soul and the body, they are nothing but the diversity of tendencies born from distinct thoughts or from confused thoughts, that is, reasons and instincts or passions. (Leibniz, 'L'addition à l'explication du système nouveau', ed. Gerhardt (IV, 576))

In 1692 Christian Thomasius published an introduction to ethics, *Einleitung zur Sittenlehre*, and in 1696 a more practical continuation volume under the title *Ausübung der Sittenlehre*, a guidebook for improving one's practical life by philosophical means. After a survey of the psycho-somatic theories of emotions of his predecessors, Thomasius suggests, similarly to Augustine, that all emotions could be treated as variants of desire (*desiderium*) (a). Thomasius's psychology of human action is built on two central powers which he calls the understanding and the will. The understanding is the power of being aware of things and the will is the power by which the mind orientates to action. There are passions and actions of the will – its passions or affects

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are caused by cognitive representations and the changes of the vital spirits in the heart; its actions are choices and decisions. The affects are also called inclinations of the mind (*Gemüthsneigung*). Contrary to the Cartesian theory, Thomasius stresses that wonder is not an affect of the will and consequently not a passion. Similarly he remarks about pleasure and distress that these are not passions of the will, but rather feelings of understanding which may accompany passions. His idea is that the affects of the will are always directed to future (b).

In analyzing the life of his contemporaries, Thomasius distinguishes between four groups, which are led by various basic inclinations which determine the motivating affects. The good general inclination is called rational love; the evil ones are pleasure seeking concupiscence, ambition, and avarice. This general typology applies to people classified on the basis of age, social class, profession or occupation. The improvement of the passions begins from a correct idea of one's condition. This is helped by detailed tables in which some typical reaction attitudes are compared, mostly evil, so that people could identify their affective moral status, realising that they have some elements from various columns. The idea is that they can see how much they have of each type and which is the dominant one in them. They usually have something of the rational love type as well, but not very much (VII.33 (170–173)). It is part of Thomasius's pessimism to think that rational love does not play a significant role in the society of his days.

For Leibniz the human soul or mind is a rational substance and like all substances characterised through its striving force (*conatus*) and its perceptions. Everything is animated and so created rational minds are embodied too. Leibniz rejects the Cartesian doctrine of causal interaction between mind and body, arguing that the relation should be understood in terms of representation or expression: minds and their perceptions express changes or modifications of the force or striving of the body. Perceptions arise from appetites or desires and generate appetites and desires. Only a limited number of the infinite subconscious or unconscious perceptions are consciously perceived, and even less of them are distinctly and adequately perceived, yet we are constantly affected and moved by countless inclinations too minute to be separately discerned or distinctly noticed by our cognitive capacities (c). Leibniz's most extensive remarks on the passions are in the *New Essays on Human Understanding*, a detailed commentary on John Locke's *Essays on the Human Understanding*. From Locke's empiricist perspective passions consist essentially in our inner feelings or sentiments of them, Pleasure and pain are, he writes, the 'hinge on which our passions turn' and our ideas of passions are formed by reflection on these (*Nouveaux essais* II.20.3) Leibniz opposes

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this view: passions consist neither in sensations nor, as the Stoics assumed, in false opinions, but are notable changes of the tendencies (inclinations, desires) which drive us and which are derived from more or less confused and incomplete opinions about good or bad or from sentiments of pleasure or pain and accompanied by pleasure or pain (**d**). Clear and distinct cognition of an object, its grade of perfection and its relationship to us, are followed by rational inclinations or rational appetites which Leibniz calls the will. Although these play an important role in deliberation, they cannot alone determine our actions unless supported by natural instincts and those natural tendencies which conform to reason (**e–f**). For Leibniz’s use of a vectorial model in analysing emotional impulses and their control, see Knuuttila 1998; Roinila 2012. For Leibniz’s view of emotions, see Ebbersmeyer 2012.

10 Emotions, Morality and Moral Sense

a. As her forces are but small, to achieve what is good, she hath yet smaller power to rule her Passions; and though she approve not their disorders, she knows not how to remedy them. (J.-F. Senault, *The Uses of Passions*, trans.)

b. If profane *Philosophers* object unto us, that Reason was in vain given us to moderate our passions, if she have no power over them; and that nature is a useless guide, if she herself have need of a Conductor, we must satisfie them by experience, and teach them without the holy Scripture, that there are disorders in man which Reason alone cannot regulate, and that we are subject unto maladies, which nature without grace cannot cure. (J.-F. Senault, *The Uses of Passions*, trans.)

c. Men...are of a middle Nature, between these two States, between perfect Reason and mere irrational Appetite: Being inbued with Appetites and Passions, to excite and stir the up to Action, where their bare abstract Understanding would leave them too remiss. (Samuel Clarke, *The Government of Passion* (142))

d. But to proceed from what is esteemed mere goodness and lies within the reach and capacity of all sensible creatures, to that which is called virtue or merit and is allowed to man only. In a creature capable of forming general notions of things, not only the outward beings which offer themselves to the sense are the objects of affection, but the very actions themselves and the affections of pity, kindness, gratitude and their contraries, being brought into the mind by reflection, become objects. So that, by means of this reflected sense, there arises another kind of affection towards

those very affections themselves, which have been already felt and have now become the subject of a new liking or dislike. (Shaftesbury, *An Inquiry Concerning Virtue or Merit* I.2.3, in *Characteristics* (172))

d. After the general account of Sensations, we may consider other Modifications of our Minds, consequent upon these Perceptions, whether grateful, or uneasy. The first which occur to any one are Desire of the grateful Perceptions, and Aversion to the uneasy, either for our selves or others. If we would confine the word Affection to these two, which are entirely distinct from all Sensation, and directly incline the Mind to Action or Volition of Motion, we should have no Debate about the Number or Division of Affections. But since, by universal Custom, this Name is applied to other Modifications of the Mind, such as Joy, Sorrow, Despair, we may consider what universal Distinction can be assigned between these Modifications, and the several Sensations abovementioned; and we shall scarce find any other than this, that we call “the direct immediate Perception of Pleasure or Pain from the present Object or Event, the Sensation”. But we denote by the Affection or Passion some other “Perceptions of Pleasure or Pain, not directly raised by the Presence or Operation of the Event or Object, but by our Reflection upon, or Apprehension of their present or certainly future Existence; so that we are sure that the Object or Event will raise the direct Sensations in us.” In beholding a regular Building we have the Sensation of Beauty; but upon our apprehending our selves possessed of it, or that we can procure this pleasant Sensation when we please, we feel the Affection of Joy. When a Man has a Fit of the Gout, he has the painful Sensation; when he is not at present pained, yet apprehends a sudden return of it, he has the Affection of Sorrow, which might in some sense also be called a Sensation. (Hutcheson, *An Essay on the Nature and Conduct of the Passions and Affections* I.2.1)

The confidence in natural reasons’s power to direct and control passions, inherited from the Aristotelian tradition, was undermined from many directions, not only by theologians, for example Jean-François Senault, the superior of the Oratorian congregation (**a–b**), but also by mechanist philosophers who stressed the power of the passions and for whom, starting with Hobbes, reason became an inert instrument of the passions which alone can move and motivate us. The struggle between reason and passions turned into a struggle between different kinds of passions and emotions. Human nature, as some thinkers argue, need not be thoroughly bad after all, and has other resources than reason for achieving virtue and a good life. Among the latter are the Earl of Shaftesbury and Francis Hucheson, important predecessors of Hume, who developed the doctrine of a special reflective moral sense whereby goodness and badness are perceived and which can guide us to virtue where reason fails us.

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In Shaftesbury's moral theory, the affections of the reflective sense are treated as second-order emotions towards the affections which result in morally good or evil actions (**c**). He defines this as 'a sentiment or judgement of what is done through just, equal and good affection or the contrary'. This became an influential conception in the moral sense theory which was further developed by Hutcheson (**d**).

Hutcheson argued that in addition to the five external senses we possess a natural sense whereby we can perceive and enjoy beauty, other people's pleasure and virtuous actions, while suffering pain from ugliness, other people's distress and vices. Virtue consists in benevolence which is a natural quality of human beings, one we detect through our moral sense and its sentiment of approbation. Moral evaluations are based on sentiments whereby we approve benevolent actions and dislike or condemn self-interested ones, and these sentiments also motivate us to action.

11 Hume

a. As all the perceptions of the mind may be divided into *impressions* and ideas so the impressions admit of division into *original* and *secondary*,... Original impressions...are such as without any antecedent perception arise in the soul, from the constitution of the body, from the animal spirits, or from the application of objects to the external organs. Secondary, or reflective impressions are such as proceed from some of these original ones, either immediately or by the interposition of its idea. Of the first kind are all the impressions of the senses, and all bodily pains and pleasures: Of the second are the passions, and other emotions resembling them. (*A Treatise of Human Nature* II, I.1)

b. Bodily pains and pleasures are the source of many passions, both when felt and consider'd by the mind; but arise originally in the soul, or in the body, whichever you please to call it, without any preceding thought or perception. A fit of gout produces a long train of passions, as grief, hope, fear; but is not deriv'd immediately from any affection or idea.

The reflective impressions may be divided into two kinds, *viz.* the *calm* and the *violent*. Of the first kind is the sense of beauty and deformity in action, composition, and external objects. Of the second are the passion of love and hatred, grief and joy, pride and humility...But as in general the passions are more violent than the emotions arising from beauty and deformity, these impressions have been commonly distinguished from each other. (*A Treatise of Human Nature*, Book II, I.1)

c. When we take a survey of the passions, there occurs a division of them into *direct* and *indirect*. By direct passions I understand such as arise immediately from

good or evil, from pain and pleasure. By indirect such as proceed from the same principles, but by the conjunction of other qualities ... under the indirect passions I comprehend pride, humility, ambition, vanity, love hatred, envy, pity, malice, generosity, with their dependants. And under the direct passions, desire, aversion, grief, joy, hope, fear, despair and security. (*A Treatise of Human Nature*, Book II, I.1)

d. 'Tis evident, that pride and humility, tho' directly contrary, have yet the same OBJECT. This object is self, or that succession of related ideas and impressions, of which we have an intimate memory or consciousness. Here the view always fixes when we are actuated by either of this passions. According as our idea of ourself is more or less advantageous, we feel either of those opposite affections, and are elated by pride, or dejected with humility...When self enters not into consideration, there is no room either for pride or humility. (*A Treatise of Human Nature*, Book II, I.2)

e. That this proceeds from an *original quality or primary impulse*, will likewise appear evident, if we consider that 'tis the distinguishing characteristic of these passions. Unless nature had given some original qualities to the mind, it cou'd never have any secondary ones; because in that case it wou'd have no foundation for action, nor cou'd ever begin to exert itself. Now these qualities, which we must consider as original, are such as are most inseparable from the soul, and can be resolved into no other: And such is the quality, which determines the object of pride and humility. (*A Treatise of Human Nature*, Book II, I.3)

f. Since reason alone can never produce any action, or give rise to volition, I infer, that the same faculty is as incapable of preventing volition, or of disputing the preference with any passion or emotion. This consequence is necessary. 'Tis impossible reason cou'd have the latter effect of preventing volition, but by giving an impulse in a contrary direction to our passion; and that impulse, had it operated alone, wou'd have been able to produce volition. Nothing can oppose or retard the impulse of passion, but a contrary impulse; and if this contrary impulse ever arises from reason, that latter faculty must have an original influence on the will, and must be able to cause, as well as hinder any act of volition. But if reason has no original influence, 'tis impossible it can withstand any principle, which has such an efficacy, or ever keep the mind in suspense a moment. Thus it appears, that the principle, which opposes our passion, cannot be the same with reason, and is only call'd so in an improper sense. We speak not strictly and philosophically when we talk of the combat of passion and of reason. Reason is, and ought only to be the slave of the passions, and can never pretend to any other office than to serve and obey them. As this opinion may appear somewhat extraordinary, it may not be improper to confirm it by some other considerations. (*A Treatise of Human Nature*, Book II, III.3)

g. It is needless to push our researches so far as to ask why we have humanity or a fellow-feeling with others. It is sufficient that this is experienced to be a principle in human nature. We must stop somewhere in our examination of causes and there are, in every science, some general principles beyond which we cannot hope to find any principle more general. (*An Enquiry Concerning the Principles of Moral* 5.2)

In his empiricist science of mind, Hume takes perceptions, subdivided into impressions and ideas, as basic facts, not venturing into speculating about their unperceived causes.

Sensory perceptions and bodily pains and pleasure belong to the first kind. Passions are secondary or reflective impressions arising either directly from impressions or from ideas, which are bleaker copies of original impressions. Passions or emotions can be calm, as with aesthetic and moral emotions or judgements (as your pleasant perception of a virtuous action or of a beautiful face, scenery or work of art), or violent (as your reflective reaction to vivid sensory pleasure or pain), and Hume's analysis of passions in the *Treatise* is focused on the latter. It is important for his project however that the former are a kind of passions, albeit calm: they can engage and motivate to action, something that reason cannot do (a–b). Passions are subdivided into direct and indirect. The latter arise, as the former, from impressions of pain or pleasure (good or evil) but are mediated by other associated qualities (ideas) (c). (For the double association, see also *Treatise* II, 1.4.) The first passions on Hume's list of indirect passions are pride and its contrary humility, which are simple and uniform but distinctive impressions in themselves which cannot be defined but which everyone knows through experience. Pride and humility have the same object, the self, but can be distinguished through their different causes and circumstances (d). Hume's account of passions echoes Malebranche's analysis; thus for Hume too passions, although they involve simple reflective impressions of pleasure and pain, are in fact complex mental-cum-bodily phenomena, depending on other associated ideas and desires. Pride and humility always are associated with an idea of the self, as it is perceived in the given circumstances, either with pleasure because of some desirable social, aesthetic or moral feature or quality related to self, or with pain if it is perceived deprived of such qualities in humiliating circumstances. The qualities of things or actions associated with the self are the causes of these passions. That pride and humility have the self as an object is due to an original, natural constitution of the human mind, and they are triggered by the same kind of qualities universally, in all societies and cultures, while the particular objects causing them vary culturally. We could not imagine, human nature remaining the same, that there would be persons insensible to 'their power, riches, beauty or personal merit, and that their pride and vanity will not be affected by these advantages' (*Treatise* II.I, 3) (e).

Hume spends much time elaborating the laws of the association of ideas and impressions, which he takes to play the same role in our mental and moral life as Newton's laws of gravitation in the physical universe. Much like Hobbes and Spinoza, Hume stresses the importance of self-love, and

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like Hobbes he sees reason as a mere calculative power or instrument in the service of desire and other passions, without any motivating power of its own (f). On the other hand, Hume does not see human nature as corrupted but as naturally equipped also with moral and social sentiments. (For sympathy and other passions in animals, see *Treatise* II, II.12.) Thus he considers human beings as social animals and takes sympathy, benevolence and altruism as natural endowments of human nature (g). Like Shaftesbury and Hutcheson he thinks that we (differently from the beasts) are also equipped with a natural moral sense or sentiment, whereby we enjoy good actions and abhor vileness and vice. While Hume deconstructs pure reason, he elevates the moral sentiment and calm passions and, given the endowments of human nature, believes in the power of education, good habits, and self-knowledge (including knowledge of the mechanisms of passions) in learning to master violent and harmful passions. For Hume's view of emotions, see Baier 1991; McIntyre 2006; Alanen 2006; Cohon 2011; Schmitter 2010, 2012. For his view on moral and aesthetic sentiments, see Taylor (2008).

Part XI
Will and Choice

Chapter 31

Choice and Practical Reasoning in Ancient Philosophy

Håvard Løkke

Ancient thinkers acknowledged that we are the sort of creatures that want things to be a certain way and can make efforts for them to become that way. In that sense, the ancients had a notion of volition. But it is not clear how they conceived of volition. The problem is partly historical. Some late ancient, notably Christian thinkers came to regard volition in a different way than earlier thinkers had done, seeing reason as a less powerful ability than Socrates did, and instead placing their hopes on the will, which they regarded as a separate and sovereign part of the soul. About these historical developments there is much debate and little agreement. The problem is also partly conceptual. Just as we do today, the ancients used volition language in many contexts, e.g. in law, action theory and moral psychology. In Aristotle's influential terminology, one's notion of volition depends on one's notions of the voluntary (*to hekousion*), choice (*prohairesis*), and wish (*boulēsis*). It seems best, therefore, to start out with a concept of practical reasoning and then try to see how this may have developed into a recognisable concept of will.

It is generally agreed that Socrates set the stage for many debates about willing and practical reasoning in at least two ways. First, he argued that people who do bad things, do so out of ignorance and hence involuntarily, i.e. without really wanting to do so (1). Secondly, he argued that incontinence (*akrasia*) is impossible, or at least that it is not the sort of phenomenon people tend to think it is (2). Socrates seems to assume (i) that we as rational creatures desire what appears to us to be good, and (ii) that it is only our rational desire for what appears to be good, that makes us do what we do. Plato and Aristotle agreed with (i), but not with (ii). So they argued that we have all sorts of other desires that can conflict with our rational desires, e.g. a desire for drink, for recompense, etc. And Aristotle also argued against Socrates that there is a sense in which

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incontinence is possible. After Aristotle, the Stoics defended a Socratic, rationalistic conception of volition, arguing that conflicting desires are not to be regarded as a weak reason fighting against strong desires from another source, but as a weak reason fighting against *itself* and being indecisive. Further, it was against the background of these Socratic themes of involuntariness and incontinence that ancient philosophers developed theories of action, first Aristotle (building on Plato) and then the Stoics (3). Aristotle's theory is centred around deliberation and choice, while the Stoics may have emphasised the role of general rules and certainly stressed the importance of assent (*sunkatathesis*): in line with what they saw as Socrates' view, they argued that when we φ , we have invariably given our assent to φ -ing being the appropriate thing to do.

Related to these debates in moral psychology and action theory was a debate about moral responsibility, which became a live issue in the Hellenistic era (4). Aristotle had argued that we are in control of our own actions and dispositions, without having worried about causal determinism. The Stoics, on the other hand, did advocate universal, causal determinism, but maintained that in spite of everything being predetermined, there is something that is up to us (*eph' hēmin*), something we are responsible for, namely to give or withhold assent. The Epicureans opposed the Stoics by arguing that since it must be the case that there is something that is up to us, neither logical nor causal determinism can be the case. Now in this debate about moral responsibility, no Hellenistic philosopher seems to think of the will as a part of the soul by means of which we can choose freely between alternatives. Such a conception of a free will arose later (5). It may be hinted at by some late ancient Platonists and Peripatetics, among them Alexander of Aphrodisias. But the concept of a free will was probably fully developed for the first time by Christian thinkers. For example, Origen held that it is part of the Christian faith that man is created with a free will, and Augustine held that we after the fall have a two-edged free will that determine our character. Yet the rationalistic conception of volition that was dominant in the Greek philosophical tradition seems to have been upheld by some non-Christians, e.g. Boethius, and may have influenced later Christians.

1 Voluntariness: Socrates and Aristotle

a. Socrates: It is because we pursue what is good that we walk when we walk, thinking that it is better, and conversely, when we stand, we stand for the sake of the same thing, what is good. Is that not so?

Polus: Yes.

Socrates: And do we not also kill, if we kill somebody, or exile people and confiscate their property, thinking that doing these things is better for us than not doing them?

Polus: That is right.

Socrates: So it is for the sake of the good that those who do all these things do them.

Polus: I agree.

Socrates: Now did we not agree [cf. 467d6–e1] that we do not want what we do for the sake of something, but that thing for the sake of which we do them?

Polus: Yes, very much so.

Socrates: Then we do not simply want to kill people, or exile them from cities and confiscate their property – we want to do these things if they are beneficial, but not if they are harmful. For we want the things which are good, as you agree

...

Socrates [addressing Callicles]: Do you think that Polus and I were correct or not in being compelled to agree in our previous discussion when we agreed that no one does what is unjust because he wants to do so, but that all who do what is unjust do it involuntarily? (Plato, *Gorgias* 468b–c, 509e)

b. It is irrational to assume that a man who does what is unjust, does not want to be unjust ... But if a man, without being ignorant, does things which will make him unjust, he will be unjust voluntarily. (Aristotle, *Nicomachean Ethics* III.5, 1114a11–13)

c. Since that which is done by force or because of ignorance is involuntary, the voluntary would seem to be that the moving principle of which is in the person who is aware of the particular circumstances of the action. Clearly the acts due to anger or appetite are not rightly called involuntary, for in that case none of the other animals will act voluntarily, nor will children; and secondly, is it meant that we do not do voluntarily any of the acts due to appetite or anger, or that we do noble acts voluntarily and shameful acts involuntarily? Or is this ridiculous, since the cause is the same? And it would surely be strange to call involuntary the things which one ought to desire; and we ought to be angry at certain things and to desire others, for example health and learning. Also involuntary things seem to be painful, but what is in accordance with appetite seems to be pleasant. Again, what is the difference in respect of involuntariness between the errors committed upon reasoning and those committed in anger? Both are to be avoided, but the irrational passions seem to be not less human than reason is, and therefore also the actions which proceed from anger or appetite are human actions. It would be odd, then, to count them as involuntary. (Aristotle, *Nicomachean Ethics* III.1, 1111a22–b3)

The debate on voluntariness in ancient philosophy was triggered by Socrates' argument according to which no one does wrong voluntarily (**a**). Variants of the Socratic view are found in several passages in Plato, e.g., *Meno* 77b–78a. Aristotle regarded Socrates' view as irrational (**b**). See also Aristotle's *Eudemian Ethics* II.9, 1225b8–10. In his rather complex arguments, Aristotle recognised two sources of involuntary action: immediate compulsion and ignorance (**c**). On various possible interpretations of Aristotelian views on the voluntary, choice and wish, see e.g. Sauvé Meyer 1993; Kahn 1988, 238–241. It has sometimes been suggested that Greek-speaking philosophers tended to think of volition as a less unified phenomenon than those who wrote in Latin, because there is no Greek term that corresponds to the Latin *voluntas* and its cognates. See Inwood 2005. On the later development of the discussion, see also Eliasson 2008.

2 Incontinence: Socrates, Plato, Aristotle, the Stoics

a. Socrates: Come now, Protagoras, and reveal this about your thought: What do you think about knowledge? ... Does it seem to you that knowledge is something like this or rather a noble thing and capable of ruling a person, and that if someone were to know what is good and bad, then he would not be forced by anything to act otherwise than knowledge orders, and that prudence would be sufficient to save a person? (Plato, *Protagoras* 352a–c)

b. Would we say that sometimes there are thirsty people who do not wish to drink? Certainly, it happens often and to many. What, then, should one say about them? Is it not that there is something in their soul, bidding them to drink, and something different, forbidding them to do so and mastering that which bids? I think so. Does not that which forbids in such cases occur, if at all, as a result of reasoning, while what drives and drags them to drink results from passions and diseases? So it seems. Hence it is not unreasonable for us to hold that they are two and differ from one another. That with which one reasons we call the reasoning aspect of the soul, and that with which one loves, hungers, thirsts, and gets excited by other appetites we call the irrational and appetitive aspect, a companion of certain indulgences and pleasures. Yes; this is a reasonable view. Then, let these two aspects be distinguished in the soul. Now, is the spirited aspect and that by which we get angry a third one, or is it of the same nature as either of these? (Plato, *Republic* IV, 439c–e)

c. One might raise the problem: what kind of right belief is had by the person when he behaves incontinently? Some say that this does not take place if one has knowledge; it would be terrible if, when knowledge is in us – so Socrates thought – something else overpowers it and drags it about like a slave. Socrates used completely to deny this, holding that there is no incontinence, for no one acts contrary to what is best while at the same time grasping it, but only because of ignorance. To say this obviously disagrees with what appears to be the case ... Since there are two ways in which someone is said to know – for both the person who has knowledge but is not using it and the one using it are said to know – there will be a difference between doing what one should not do when knowing this, but not paying attention to the knowledge, and doing it when paying attention to it; the latter is thought astonishing, but not the former when one is not paying attention to the knowledge ... As for ‘having but not using’, we observe a distinction in having, admitting that one may have knowledge in a way and yet not have it, as with someone asleep, raving or drunk. But this is the state of those who have various passions; occurrences of anger, sexual appetite, and some other passions like these obviously alter one’s bodily condition, and in some people they even cause fits of madness. Clearly, then, we should say that incontinent people are in a similar condition to these. (Aristotle, *Nicomachean Ethics* VII.2, 1145b21–28; 3, 1146b31–35, 1147a11–18)

d. [The Stoics] say that passions are not other than reason, and that there is no difference or conflict between the two, but a turning of one reason in both directions, which we do not notice because of the sharpness and speed of the change. We are

not aware of the fact that it is really the same aspect of the soul which experiences appetite and repentance, anger or fear, and is moved by pleasure towards wrong and while moving recovers itself again. For appetite and anger and fear and all such things are opinions and erroneous judgements, which do not arise about just one part of the soul but are inclinations, yieldings, assents and impulses of the whole ruling faculty, and, generally, activities which change rapidly, just like the attacks of children, whose fury and vehemence are unstable and transient owing to their weakness. (Plutarch, *De virtute morali* 446f–447a)

Socrates defended the view that there is no such thing as incontinence (*akrasia*) in Plato's *Protagoras* (a). According to his argument incontinence is impossible, since all actions aim to realise what we believe to be good, and all wrongdoing arises from our beliefs about what is good and bad. For a discussion of Socrates' position, see Segvic 2000. There is a lot of debate about Plato's theory of the tripartite soul (b). See also pp. 467–468 above. One may wonder whether the parts of the soul are literally *parts* or rather different sources of motivation. See Lorenz 2006; Cooper 1999, 118–137. There is also debate about how to understand the so-called spirited part of the soul (*thumos*): is it a source of will-power, or rather a seat of moral sentiments? See Mansfeld 1991; Sedley 1991.

Aristotle, in express opposition to Socrates (c), not only defends the possibility of incontinence (see also *EN* VII.3, 1147b13–17), but also gives an explanation of *how* it occurs (see also *EE* II.9, 1225a10–13). His solution, which relies on the observation that we can have knowledge without using it in the right sort of way, is much discussed: for more, see Davidson 1980; Charles 1984, 109–196.

The Stoics (d) held that emotions are false or confused value judgements which make our minds susceptible to the sort of behaviour people call incontinence. Our richest source for the Stoic theory of emotions is Galen's treatise *On the Doctrines of Hippocrates and Plato*. The view outlined by Galen is generally agreed to come from the third head of the Stoic school, Chrysippus, but its monistic view of human psychology may have been revised by the later Stoics, Posidonius in particular. See Cooper 1999, 449–484; Inwood 2005, 23–42. The Stoic views on incontinence are comprehensively discussed by Joyce 1995. On the later development of the ancient views on incontinence, see Saarinen 1994; Bobonich and Destrée 2007; Müller 2009.

3 Practical Reasoning: Aristotle and the Stoics

a. One thing moves us, namely that which desires; for if there were two movers – reason and desire – they would move in virtue of some common aspect. Now, reason does not seem to move us without desire, for wish is a desire. And whenever one is moved in

accordance with reason, one is also moved in accordance with wish. But desire also moves us in conflict with reason, for appetite is a sort of desire. (Aristotle, *De anima* III.10, 433a21–26)

b. We deliberate not about ends but about means to an end. For the doctor does not deliberate whether to heal, an orator whether to convince, a statesman whether to produce a good order, nor does anyone else deliberate about the ends. Having set the end, they consider how and by what means it is to be attained ... The same thing is deliberated and chosen, except that what is chosen is already determinate, for what is chosen is that which has been judged in deliberation. For everyone ceases to inquire how to act when he has brought the beginning back to himself and to the ruling aspect of himself; for this is what chooses. (Aristotle, *Nicomachean Ethics* III.3, 1112b11–16, 1113a3–7)

c. What, then, or what kind of thing is [choice], since it is none of those we have mentioned. It seems to be voluntary, but not all that is voluntary seems to be an object of choice. Is it, then, what has already been deliberated about? At any rate choice involves reason and thought ... The object of choice being one of the things in our power which is desired on the basis of deliberation, choice is a deliberate desire of things in our power; for when we judge as a result of deliberation, we desire in accordance with our deliberation. (Aristotle, *Nicomachean Ethics* III.2, 1112a13–17; 3, 1113a9–12)

d. What is the theme most argued about by Chrysippus himself and Antipater in their struggles with the Academics? It is the claim that without assent there is neither action nor impulse and that they are talking nonsense and making empty assumptions who maintain that, whenever an appropriate impression occurs, an impulse follows at once without people having yielded or given their assent. (Plutarch, *De Stoicorum repugnantis* 1057a)

e. Our question is whether anger originates from choice or impulse ... Is an assent of the the mind required for it to be aroused? ... You ask: ‘What is the point of this question?’ That we may know what anger is, for if it arises against our will, it will never succumb to reason. For all movements which do not result from our will are bound and unavoidable, for example shivering when cold water is sprinkled on us, or recoiling at the touch of some things – bad news make our hair stand on end, indecent language brings on a blush, and dizziness follows the sight of a precipice. None of these things is in our power; no reasoning can prevent them from happening. But anger may be prevented by precepts, for it is a voluntary error of the mind. (Seneca, *On anger* II.1.1–2.2)

f. By nature, all people pursue apparent good things and avoid their opposites. Therefore, as soon as one receives an impression of any apparent good, nature itself urges them to reach out after it. When this is done prudently and in accordance with consistency, it is the sort of reaching which the Stoics call a *boulesis*, and which we shall call a ‘volition’. They think that a volition, which they define as ‘a wish for some object in accordance with reason’, is found only in the wise person. But the sort of reaching which is aroused too vigorously and in a manner opposed to reason

is called ‘desire’ or ‘unbridled longing’, and this is what is found in all who are foolish. (Cicero, *Tusculan Disputations* IV.6.12)

Aristotle’s theory of action is centered on a notion of practical reason, involving the ‘practical syllogism’, which in turn is centered on three elements, namely desire, deliberation and choice (**a**). On Aristotle’s distinction between reason and desire, see also his *Topics* IV.5, 126a13; *De motu animalium* 6, 700b17–23; *Rhetorics* I.10, 1369a1–4; *Nicomachean Ethics* III.4, 1113a15. It is generally agreed that we should not think of Aristotle’s distinction in Humean terms in which cognition and desire are strictly distinct from each other. See e.g. Broadie 1993, Ch. 5, which also contains discussions of Aristotle’s notions of deliberation (**b**) and choice (**c**). Aristotle’s and Plato’s action theories are still influential today. See also Watson 2004 on free agency.

The Stoic theory of action, based on the notions of assent (*sunkatathesis*) and impression (*phantasia*), is as complex as Aristotle’s. There is a debate whether the Stoics thought of virtue as a skill (*technē*) in a more literal sense than Aristotle had done, and, if so, whether they thought of moral reasoning more in terms of application of rules than he had done; see Striker 1991 and Inwood 2005, 95–131. The Stoics placed much emphasis on the notion of assent, arguing that all our actions (**e**) and all our beliefs (**f**) rely on the sort of assent we give to impressions we receive from the external world, i.e. on what we judge to be good, bad or indifferent. It is only this giving of assent that is up to us (see 4 below). The aim of Stoic philosophy is to become fully correct and consistent in giving assents, so that one is entirely governed by one’s rational desire, rendered by Cicero as *voluntas* (**f**).

4 Agency and Responsibility: Aristotle, the Stoics, the Epicureans

a. It is clear that all those actions of which man is a starting-point or controller, may happen or not happen, and with those things at least the existence or non-existence of which he controls, their happening or not happening depends on him. Of all those things of which it depends on him to do or not to do, he himself is the cause; and all those things of which he is the cause depend on him. (Aristotle, *Eudemian Ethics* II.6, 1223a4–9)

b. In affirming that everything is fated, [the Stoics] used the following example. When a dog is tied to a cart, if it wants to follow it is pulled and it follows, making its power of self-determination coincide with necessity, but if it does not want to follow, it will be compelled in any case. Similarly, even if men do not want to, they

will be compelled in any case to follow what is destined (Hippolytus, *Refutatio omnium haeresium* 1.21; SVF 2.975=LS 62A)

c. My friend, you have a choice which is by nature unimpeded and unconstrained ... I will prove this to you, first on the subject of assent: Can anyone prevent you from assenting to a truth?

- No-one can.
- Can anyone compel you to accept a falsehood?
- No-one can.
- Do you see that on this subject, you have a power of choosing that is unimpeded, unconstrained, unhindered? Come now, is it any different when it comes to desire and impulse? (Epictetus, *Dissertationes* I.17. 21–24)

d. From where, I ask, comes this will wrested from the fates, through which we go wherever each one's pleasure leads, and likewise swerve off our motion at no fixed time or place, just as the mind itself carries us? For without doubt it is will which gives these things their beginning for each of us, and from will motions are spread through the limbs ... You may see that the beginning of motion is created from the heart and proceeds initially from the mind's volition, and from there is spread further through the entire body and limbs ... So in the seeds too you must admit the same thing, namely, that there is another cause of motion besides blows and weight, from which this power is born in us, since we see that nothing can come into being out of nothing. For weight prevents all things from coming about by blows, by a sort of external force. But that the mind does not itself have an internal necessity in all its behaviour, and be overcome and, as it were, forced to suffer and to be acted upon – that is brought about by a tiny swerve of atoms at no fixed place or time. (Lucretius, *De rerum natura* II. 257–293)

Aristotle had a general view on responsibility according to which an adult human being is 'in a way' responsible for those acts and features of character the coming-about of which were in his power (**a**, cf. also *Nicomachean Ethics* III.5, 1114b2–3). It was only with Stoic determinism that the problems of responsibility became subjects of a systematic debate. As the picturesque cart analogy suggests (**b**), the Stoic solution to the problem was compatibilism: even in a pre-determined universe, one is responsible for certain things, because it is nevertheless up to oneself which impressions one assents to, and thus what one believes and does (**c**). It is debated whether this solution escapes fatalism. See Bobzien 1999a. The Epicureans face much the same challenge as the Stoics – how to accommodate agency in a world governed entirely by matter in motion? They, however, opt for the opposite solution: since we must assume that we are responsible agents, there must be a way in which we are causal originators of our actions. Lucretius argues that free will presupposes

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some indeterminacy in the motions of atoms which he explains as an unpredictable ‘swerve’ of atoms; otherwise our motions would be determined by unbreakable causal chains (**d**); Sedley 1998. See also Epicurus, *Letter to Menoeceus*, in Diogenes Laertius, *Lives of Philosophers* X.133–134. Epicurus’ notion of agency has been much debated: does it involve a conception of a free will, or is it more like chance causation? See Bobzien 2000; O’Keefe 2005.

5 Free Will: Some Philosophical and Early Christian Views

a. We assume that we have this power in our actions that we can choose the opposite and not everything we choose has pre-determined causes, on account of which it is not possible for us not to choose it. This is sufficiently shown also by the regret which is often felt about what has been chosen, for it is because we could also have not chosen and not done that which we regret and for which we blame ourselves for our neglect of deliberation. But also, when we see others judging poorly about the things that they have to do, we reproach them too as going wrong ... It is well-known in itself that the expression ‘up to us’ is said of the things over which we have in us the power to choose the opposite. (Alexander of Aphrodisias, *De fato* 180.26–181.6)

b. The creator granted to the minds He created the power of free and voluntary movement, so that the good which was in them might become their own through being preserved by their own will ... Since the teaching of the Church includes the doctrine of God’s just judgement ... and since this presupposes that things worthy of praise and blame are within our power, come now and let us have a brief discussion about the self-governing power, which is a very important issue ... There are many passages in the Scriptures which testify to self-governance ... But since there are also passages suggesting the contrary, namely that it is not up to us to keep the commandments and to be saved, nor to break them and be lost ... come and let us record also some of these passages and look for their solution ... Let us look also at the following passage: ‘It does not depend on human will or effort, but on God’s mercy’ (Romans 9: 16). Our adversaries say: if it does not depend on man’s will or effort, but on God’s mercy, salvation does not come from what depends on us, but from the arrangement which has been established by he who arranged things, or from the choice of he who is merciful whenever he wants. (Origen, *De principiis* II.9.2; III.1.1, 6–7, 18)

c. Since a mind which is ruling and possesses virtue is not made slave to inordinate desire by anything equal or superior to it, because of its justice, or by anything inferior to it, because of its infirmity, it remains, as what we assessed indicates, that nothing else makes the mind a companion of cupidity than its own will and free choice. (Augustine, *De libero arbitrio* I.11)

d. The mind commands the hand to move and it is so easy that the order can hardly be distinguished from its execution. Yet the mind is mind but the hand is body. The mind commands the mind to will, not something else, and yet it does not perform it. Where does this monstrosity come from? Why does this happen? The mind commands itself to will, I say, and it would not command unless it willed. Yet it does not perform what it commands. In fact it does not fully will it and therefore it does not wholly command it. It commands only in so far as it wills, and in so far as it does not will, the command is not carried out. For the will commands that there be a will in itself, but the command is not fully given and therefore it is not realised. For if the will were full, it would not command this since it would be so already. It is therefore no monstrosity to be partly willing and partly not willing. It is a disease of the mind, which does not wholly rise when it is lifted up by the truth, being weighted down by habit. So there are two wills because neither is the whole will and each possesses what the other lacks. (Augustine, *Confessions* VIII.9.21)

e. If we ask the cause of the misery of evil angels, we find that it is the just result of their turning away from Him Who supremely is, and having turned towards themselves who do not have supreme existence. What other name is there for this fault than pride? ... This was the first defect and first failing and the first flaw of their nature which was not created to have supreme existence; yet it was capable of possessing blessedness in the enjoyment of Him Who supremely is. For by turning away from Him it did not become nothing, but it sank to a lower degree of being, and therefore came to misery. If we try to find an efficient cause of this evil will, there is none to be found, for nothing causes an evil will, since it is the will itself which makes an act evil. Therefore the evil will is the efficient cause of the evil act, whereas there is no efficient cause of the evil will. (Augustine, *De civitate Dei* XII.6)

f. We do not say that the free choice of the will is whatever anyone might wish. It is rather whatever anyone might decide on the basis of judgement and examination ... Free choice is ... a judgement of the will that is free for us. For as often as certain images come together in the mind and stir the will, reason weighs them carefully and judges regarding them, and then when it has carefully weighed its choice and considered its judgements, it does what seems better to it. And it is for that reason we disdain some things that are sweet and that give the appearance of being useful. Other things that are bitter we bravely endure even though we do not want them. To that extent free choice is not of the will, but of the judgement of the will, and it is based not on the imagination, but on the careful weighing of that same imagination. And it is for that reason that of certain actions we ourselves are the sources ... (Boethius, *In Perihermeneias II*, 196. 4–6, 9–11, 13–26)

It is often held that the change from pre-Christian to Christian philosophy brought with it a change from a rationalistic to a voluntaristic conception of volition, the latter typically characterised by the will being conceived as a separate faculty of the soul, on account of which we can choose freely between alternatives. While there is some truth in this, it is not clear when, by whom and for what reasons this conceptual change took place. For discussions of these questions, see Frede 2011; Irwin 1992; Kenny 1979; Dihle 1982; Bobzien 1999a; Sorabji 2000, 319–340; Eliasson 2008. In criticising Stoic determinism, Alexander of Aphrodisias argues that free action requires open future alternatives in a way which is taken to show similarities to later ‘libertarianism’ in the theory of free action (a). See Sharples 1983. Origen qualified the Stoic compatibilism by stressing the freedom (*autexousion*) of the will (b). See also Frede 2011.

Augustine seems to stay close to Socratic considerations when he argues that wrongdoing must be caused by the will since no other mental capacity is strong enough to overpower a virtuous mind (c). Again, Augustine seems to account for incontinence in Stoic terms when he argues that in our diseased mental state, the will is divided (d). His division between a desire for truth and a desire for bodily lust (see *Confessions* VIII.5) is, however, more Platonic than Stoic. As these comments suggest, there is some lack of clarity concerning whether Augustine regarded the will as a separate and sovereign part of the soul (cf. e), or remained relatively close to the Greek rationalistic conception of volition. See Horn 1996, and Lössl 2004. Boethius, writing in the sixth century CE, certainly upheld a rationalistic conception of volition, partly by using voluntaristic terminology (f). For a discussion of Boethius’ notion of will, see Kretzmann 1985.

Chapter 32

Will and Choice in Medieval Thought

Taina M. Holopainen

Early medieval thinkers operated with various distinctions pertaining to the notion of the will. Anselm of Canterbury distinguished between the will as a power of the intellectual part of the soul, the inclination of the power, and the act of that power. The inclinations provided the motivational basis for the acts of will. An often quoted part of Anselm's theory was the division between the inclinations to what is advantageous and what is right, the former being *affectio commodi* and the latter *affectio iustitiae*. These terms were applied, e.g., by John Duns Scotus, who associated the two affections with the freedom of will. In addition to the view of natural inclinations inhering in the will, it was assumed that some reactions of the will are natural rather than chosen. This distinction between the will as reactive and the will as actively choosing was later referred to with the terms 'natural will' and 'rational will'. The phenomenon of willing was under consideration from the terminological point of view, too. While Peter Abelard suggested that something is willed only when it is pleasing, most thinkers thought that reluctantly chosen acts can be characterised as acts of will. Conditional will was included in the early medieval discussion of the will. There were two interpretations of this. On the first interpretation, conditional willing could be identified with actual willing in which something was not willed as such but under particular conditions. The other way was to equate it with counterfactual optative wish called *velleitas* (1).

Early medieval views of the freedom of will were strongly influenced by Augustinian ideas: the will is under no necessity and even though the initial movements of the emotional parts of the soul may be not controllable, the consent or dissent with respect to them is free. Human freedom, which was taken to be required for moral responsibility, was discussed until around 1270 under the concept of 'free

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decision' (*liberum arbitrium*). Peter Lombard defines free decision as a faculty of both reason and will. As a faculty of reason it discerns between good and evil; as a faculty of will it is able to be orientated to either (2).

Thomas Aquinas, influenced by an Aristotelian way of thinking, regards the will as the motive power of the intellectual part of the soul, which is directed to what the intellect considers good. This general orientation is associated with practical reasoning which aims at finding activities which are to be done for the sake of the ends apprehended as good. The results of reasoning are then realised by the choices of the will. Aquinas, as all medieval authors, thought that the freedom of the will requires that nothing outside the mind compels the will to will that which it does not will. Although Aquinas certainly thinks that the will is free, he still regards reason as the cause of the freedom of the will (or, of the choice of the will). As an inner cause, it can make the will choose something (3).

John Duns Scotus, as a voluntaristic thinker, looked at the will as a self-mover and a free cause of its own volitions to the effect that the will cannot be forced to will by any other cause, whether internal or external to the mind. His conception of the causality of the will was in line with the view of Henry of Ghent and Peter John Olivi who taught that the cognition of an object is a *sine qua non* cause of volition, the will alone being its total efficient cause. According to Olivi, an act of will is free, when it is directed to a knowable object so that the will makes itself will this object and also wills that it wills it. The efficient cause of the free volition is the will alone which moves itself to a certain direction and accepts this moving by a reflexive act. In the voluntaristic psychology of will, the will was regarded as a free cause which can change its preferences with respect to the various options proposed by reason. This was foreign to rationalism represented by Aquinas.

Voluntaristic thinkers assumed that the will has natural inclinations in a way which was influenced by Anselm's doctrine of the affections of the will. It was also thought that the will reacts spontaneously with favour or with disfavour to objects of choice. John Duns Scotus and William of Ockham called these primary orientations acts of liking (*complacentia*) or dislike (*displicentia*). In their view, these non-effective acts are immediate, free reactions of the will. The phenomenon of liking and dislike was also treated quite differently. John Buridan maintained that the primary orientations of the will are not free, but the will can freely accept or reject them. Scotus paid attention to the relation between effective and non-effective willing (as acts of liking and dislike) by noticing that although a choice is preceded and accompanied by an act of liking, still, that which is chosen can be one of the things disliked. Scotus introduced the discussion of the passions of the will, pleasure and distress, which are caused emotional states of the intellectual part of the soul (4).

Thomas Aquinas and some other Aristotelian thinkers believed that the will does not deviate from reason. The will can control the lower motions of the soul by accepting or refuting the emotional suggestions. Sometimes, however, it can happen that overwhelming emotional impulses interfere with the choice of the will according to reason with the result that an akratic action takes place. According to Aquinas, incontinent people may choose at a certain point of time to follow their passions, but they do not then act from choice and they do not follow their moral disposition.

Thus, incontinence forms a passing condition which does not destroy the capacity to control oneself, although it weakens it at a particular moment so that one fails to exercise this capacity. The choice of the will to follow a disordered passion always involves ignorance or error on the part of the reason. The choice is materially an act of will but formally an act of reason.

Aquinas's model of akratic action is in line with the view that the will follows reason, if it acts at all. Scotus and Ockham formed their views in conformity with the idea of the will as a free cause which can choose against the judgement of reason. One may freely elect against a well understood alternative that one's reason believes to be best. This may show a change of mind for which there is no other cause but the will. An akratic person may incontinently choose false things when the will is occurrently inclined to a wrong end by a passion, but it can also choose from malice, without such weakening affects, in which case the election is genuinely vicious (5).

1 Terminological Distinctions on Will

a. In fact, the will appears to be spoken of equivocally, in three senses: the tool for willing, the affection of this tool, and the use of this tool. The tool for willing is that power of the soul which we use for willing, just as reason is the tool for reasoning, which we use when we reason and sight is the tool for seeing, which we use when we see. The affection of this tool is that by which the tool is so inclined to will something (even when one is not thinking of what it wills) that if this thing comes to mind, the tool wills it either immediately or at the appropriate time ... Consequently, the will as tool, the will as affection, and the will as use are not the same. Indeed, the will as tool moves all the other tools which we freely use – both those which are part of us, like hands, tongue, sight, and those which are external to us, like a pen or an axe. It causes all of our voluntary motions; but it moves itself by means of its affections. (Anselm of Canterbury, *De concordia praescientiae et praedestinationis et gratiae dei cum libero arbitrio* III.11 (279.13–23; 283.19–284.3))

b. One of these is the affection for willing the advantageous, the other for willing what is right. To be sure, the will which is the tool wills nothing except either the advantageous or the rectitude. For whatever else it wills, it wills either for the sake of the advantageous or for the sake of the rectitude; and even if it is mistaken, it regards itself as being related to what it wills with respect to these two. Because of the affection for willing the advantageous, one always wills happiness and to be happy; because of the affection for willing what is right, one wills the rectitude and what is upright (i.e., to be just). (Anselm of Canterbury, *De concordia praescientiae et praedestinationis et gratiae dei cum libero arbitrio* III.11 (281.6–12))

c. According to Anselm, there are two affections in the will, namely, the affection for justice and the affection for the advantageous. He deals with these extensively in *The Fall of the Devil*, chapter 14, and *The Harmony of God's Foreknowledge, Grace,*

and Predestination, chapter 19. The affection for justice is nobler than the affection for the advantageous, understanding by justice not only acquired or infused justice, but also innate justice, which is the congenital liberty of the will according to which it is able to will some good not oriented to self. According to the affection for the advantageous, however, nothing can be willed save with reference to self. And this we would possess if only an intellectual appetite without liberty followed upon intellectual knowledge, as sense appetite follows sense cognition. (John Duns Scotus, *Ordinatio* III.26 (ed. Vat. 10, 35.670–36.679))

d. It seems to me that all instances of will are included in this fourfold division. Of the four kinds of will, the one which I called efficient will brings about what it wills, as far as it can, and it approves of it, concedes to it, and allows it to take place. The approving will does not bring about what it wills, but only approves of it, concedes to it, and allows it to take place. The conceding will neither brings about what it wills nor approves of it, except for the sake of some other things, and it only concedes to it and allows it to take place. The allowing will neither brings about what it wills nor approves of it nor concedes to it, but it only allows it to take place, even though disapprovingly. (Anselm of Canterbury, *Fragmenta Philosophica* 38)

e. The will of Christ was twofold, one was the will of sensuality which derived from the weakness and by which he wanted to avoid death, as all humans do. And by this will he asked the chalice [of suffering] to be removed, i.e. that he should not have it, and this petition was not fulfilled. His other will was that of reason, for he deliberately willed to die in order to save humanity – this was by the will of reason because it derived from reason. (Simon of Tournai, *Disputationes* 97 (281))

f. If someone says that this person willed to kill his master in order that he might avoid death, he cannot therefore, without qualification, infer that he willed to kill him. For example, if I say to someone, ‘I will you to have my cap for the reason that you give me fifty cents’, or ‘I cheerfully will it to become yours at that price’, I do not therefore grant that I will it to be yours ... Surely such a will, so to speak, which consists of great sorrow of mind is not to be called will but rather suffering. That he wills this on account of that is like saying that he tolerates what he does not will on account of what he does desire. Thus a sick person is said to will to be cauterised or operated in order to become healthy, and martyrs to suffer in order to come to Christ, or Christ himself in order that we might be saved by his passion. But we are not therefore forced to grant without qualification that they will this, for there cannot be suffering except where something happens against one’s will, nor does anyone suffer when his will is fulfilled and this delights him. (Peter Abelard, *Scito te ipsum*, 5.126–6.147)

g. The will is relational or conditional, when we do not will something as such but under a condition, and we do not will it without the condition. This can take place in two ways. Namely, the condition can be a pulling one, as in the case that someone would will to commit a sin because of a great advantage, which he would not will as such. Or, the condition can be a compelling one, as when someone would commit a sin for the sake of avoiding death, which he would not do without the condition. (Alexander of Hales (?), *Summa theologiae* I, 435a)

h. Therefore, it is clear that he [the sinner] does not will to avoid doing evil but only would will to do so. These two words do not mean the same. The word *vellem* is either a present tense optative or past tense conjunctive imperfect. If it is optative, it implies the adverb *utinam* and reads: '*utinam vellem*' to be good; in other words: 'I wish I had the benefit of grace, and by means of it could say that I really will to be good.' If it is past tense conjunctive imperfect, it means: 'If I had the benefit of grace, but as long I don't have it, I never can truly say that I will to be good.' Or: 'I would will to be a king, but I don't will to be a king.' So 'I would will to be good' is something different from 'I will to be good'. There are many other examples of this, such as 'I would will to go to Rome if it were necessary or if it were useful; but I do not will to go to Rome.' (Peter of Poitiers, *Sententiae* II.14 (98.271–284))

i. But free decision is the faculty of reason and will, by which the good is chosen, with grace assisting, or evil, with the same ceasing. And it is said to be free as much as regards the will, which is able to be bent to either; but a decision as much as regards the reason, of which it is that faculty or potency, and which discerns between good and evil things. And indeed sometimes, having the discretion of good and evil, it chooses what is evil, but sometimes what is good. (Peter Lombard, *Sententiae* II.24.3 (452–453))

Anselm explains that the will may mean the faculty of will (*instrumentum volendi*), the affection of that faculty (*affectio instrumenti*), or its occurrent volition (*opus instrumenti*) (**a**). He distinguishes between two affections of the will which are related to the idea of two kinds of good and their opposing evils. One good is called advantage (*commodum*), and the opposing evil disadvantage (*incommodum*); these are what we aim at or avoid while willing happiness. The other good is called justice, and the opposing evil injustice; these are associated with willing fitting or unfitting things (**b**; see also *De casu Diaboli*, chapters 12 and 14). Anselm's often-quoted doctrine of the two affections of will has its background in Cicero's *De officiis*. Cicero discusses the distinction between usefulness and virtue (or moral good) under the terms of utility (*utilitas*) and of honesty (*honestas*); Anselm uses the terms advantage (*commodum*) and justice (*iustitia*) without any notable change in meaning. After Anselm, many authors applied this division as the distinction *affectio commodi* vs. *affectio iustitiae*. See, for example, *Summa sententiarum*, III, 6 (PL 176, 97A–97B); Hugh of St Victor, *De sacramentis christiane fidei*, 7, 11 (PL 176, 291B–291C); John of Salisbury, *Polycraticus*, 5 (PL 199, 720C–720D); Honorius Augustodunensis, *De libero arbitrio* (PL 172, 1225D–1226A). In the fourteenth century, the same distinction was used by John Duns Scotus, who maintained that *affectio iustitiae* represents the inner freedom of the will: by this inner freedom the will is free for aiming at good

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as such (c), independently of other inclinations (cf. Williams 2003). For Anselm's conception of will, see Normore 2002; Ekenberg 2005.

Anselm's further distinction, found in the *Philosophical fragments*, concerns the act of willing, which can be classified as consisting of four different kinds of will: efficient, approving, conceding, and permissive. Efficient will causes what one wills: for example, a sick person wills health in this way. Approving will occurs when we have nothing against something which we are nevertheless unwilling to effect ourselves, although we could effect it. For example, we could say that we approve of a poor person being clothed, without willing ourselves to contribute to this. Anselm gives an example of conceding will by referring to a creditor who accepts from a debtor barley in place of the wheat which the debtor cannot pay, although he himself prefers wheat as a payment. An example of the fourth way of willing is when one permits the occurrence of a thing that one dislikes and could prevent but does not do so. For example, a ruler who neither approves nor concedes a disaster made by robbers can be said to permit the evils done by them (d).

One further early medieval distinction was between the will of sensuality and the will of reason. The former one refers to the first orientation guided by human sensuality: for example, all human beings have the natural will to avoid death. It may be in need of re-evaluation by reason. The will of reason is a choice based on deliberation (e). Thomas Aquinas similarly drew a distinction between the will based on reasoning (*voluntas ut ratio*) and spontaneous natural human will (*voluntas ut natura*) as sensory desire (*voluntas sensualitatis*). See *Summa theologiae* III.18.5–6; 21.4. See also Robiglio 2002, 56–60, 108–110.

Abelard stresses that the term 'will' is used so that it implies emotional liking. A decision should not be called will without this positive component but, rather, suffering or enduring (f). Instead of saying that people will an operation we should say that they endure it as a means for the sake of the end of health. They voluntarily consent to the operation in order to become healthy. Abelard's terminological point concerning the use of 'will' remained in minority. Most thinkers did not claim that whatever is called 'willed' must be found to be pleasing, but accepted the view that reluctantly chosen acts can be said to be willed. For the discussions of the logic of the will in the twelfth century, see Knuuttila 2006, 205–210.

Some thinkers associated conditional will with actual willing in which something was not willed as such (*simpliciter*) but under particular conditions (*sub conditione finis*). This is how conditional will is included in the well-known example of reluctantly willing to throw goods from a ship floundering

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on a stormy sea in order to be saved (Aristotle, *Nicomachean Ethics* III.1, 1110a8–19). Alexander of Hales regards conditional will as an act of actual willing (g). There were, however, others who interpreted conditional will in a different way. For example, Peter of Poitiers prefers to connect conditional will with a counterfactual wish, called *velleitas*, expressed in the optative mood. For example, ‘I would will (*utinam vellem*) to be good’ is different from *voluntas* expressed in the indicative mood, ‘I will to be good’, as he clarifies the difference (h). According to this reading, the above example of the ship on a stormy sea implies that one would like not to throw goods from the ship, if only there were some other way to save one’s life. For the notion of conditional will, see Saarinen 1994, 75–82, 129–131; Robiglio 2002, 82–89; Knuuttila 2006, 208–209.

Human freedom, which is needed for moral responsibility, was discussed until around 1270 under the concept of ‘free decision’ (*liberum arbitrium*); thereafter the terminology changed so that discussions of freedom used to concentrate on free will instead of free decision (see Kent 1995, 98–110). In the twelfth century, Peter Lombard defines free decision as a faculty of both reason and will. As the faculty of reason it discerns between good and evil. As the faculty of will it can be bent to either (i).

2 Early Medieval Discussions of the Freedom of Will

a. Even the appetites which the apostle called ‘the flesh which lusts against the spirit’ and ‘the law of sin which is in our members, warring against the law of mind’ are not just or unjust considered in themselves, for they do not make that person just or unjust who experiences them, but they make unjust only the person who consents to them by will when one ought not to do so ... Therefore, there is no injustice in their essence, but only in a rational will which follows them in an inordinate way. (Anselm of Canterbury, *De conceptu virginali et de originali peccato* 4 (144. 4–16))

b. For he who says, ‘Do not pursue your lusts, and turn away from your will’, commanded us not to fulfil our lusts, but not to be entirely without them. For fulfilling them is wicked, but being without them is impossible for our infirmity. So it is not a sin to lust after a woman but to consent to the lust, and it is not the will to lie with her that is damnable but the will’s consent ... We consent to what is not allowed when we in no way draw back from committing it and are wholly ready to carry it out if given the chance. Whoever is found in this condition incurs complete guilt. Adding on the deed adds nothing to increase the sin. Instead, for God, someone who

tries as hard as he can to do it is just as guilty as one who does it as far as he can. It is just as if he too had been apprehended in the very act, as blessed Augustine reminds us. (Peter Abelard, *Scito te ipsum* I (8.205–211; 9.227–235))

c. Teacher: No one abandons rectitude except by willing. For if ‘against one’s will’ means ‘unwillingly’, no one abandons this rectitude against one’s will. For someone can be bound against his will, because one can be bound when unwilling to be bound; someone can be tortured against his will, because one can be tortured when unwilling to be tortured; someone can be killed against his will, because one can be killed when unwilling to be killed. But one cannot will against one’s will, because one cannot will when one is unwilling to will. For everyone who wills, wills his own willing. (Anselm of Canterbury, *De libertate arbitrii* 5 (214.18–23))

d. There are many things by which we are prohibited from action, but we always have will and consent within our decision. (Peter Abelard, *Scito te ipsum* I (16.423–424))

e. Teacher: It is true, as you say, that they can receive the lost rectitude if they were given it again. But we are asking about the freedom which they had before they sinned, for undoubtedly they had free choice, not about a freedom which no one would need if he had never abandoned the truth ...

Student: ... But we believe that freedom of choice contributes to justice. Therefore, we must assert without a doubt that a rational nature received freedom only for preserving the rectitude of the will for the sake of the rectitude itself.

Teacher: Therefore, since every freedom is a power, the freedom of choice is the power to preserve the rectitude of the will for the sake of the rectitude itself ... So it is now clear that a free choice is nothing other than a choice which is able to preserve the rectitude of the will for the sake of the rectitude itself. (Anselm of Canterbury, *De libertate arbitrii* 3 (211.27–30; 212.15–23))

f. Further, the will is a rational power of movement, and it presides over sense power and natural desire. To be sure, wherever it turns it always has reason as its companion and as it were its handmaiden, not in the sense that it is always moved by reason, but in the sense that it never moves without reason, so that it brings about many things with the aid of it against it, that is to say, as if on the basis of its assistance but against its deliberation or judgement ... As a result, everything in a human being except for the will is free from both [imputation of good or evil to it] because it is not free of itself: life, sense power, natural desire, memory, talent, and whatever there are of this kind, are as themselves subject to necessity, due to which they are not entirely in the power of the will. As for the will itself, it is impossible to deprive it of its liberty because it is of itself impossible for it not to obey itself, for no-one does not will what he wills or wills what he does not will ... There is, however, according to what can befall us, this threefold freedom: from sin, from wretchedness, and from necessity. Nature gives us the last-mentioned in the creation; grace restores us to the first-mentioned; the one in the middle is reserved for us in our homeland [i.e., in

heaven]. Therefore, the first can be called ‘freedom of nature’, the second ‘freedom of grace’, and the third ‘freedom of life’ or ‘freedom of glory’. For by the first, we are created into a free will or voluntary freedom, as a noble creature of God; by the second we are reformed into innocence, as a new creation in Christ; by the third, we will be elevated to glory, as a perfect creation in Spirit. Hence, the first freedom has much honour; the second has in addition the greatest amount of virtue; the last one is the consummation of pleasure. (Bernard of Clairvaux, *De gratia et libero arbitrio* 2.3–3.6 (168.1–171.11))

g. Let us now return to the topic at hand, that is, to the treatment of free decision, which, according to the definition of philosophers, means the free judgement of the will, because that power and ability of the will and reason, which we said above was free decision, is free regarding either alternative, because it can freely move to this or that. Thus, it is said to be free decision regarding the will, because it can be voluntarily moved, and of spontaneous desire directed, to those things which it judges, or can judge, to be good or evil. (Peter Lombard, *Sententiae* II.25.1 (461))

Early medieval thinkers usually made a distinction between desires as movements of the mind and desires to which one consents or does not consent. The first one refers to all kinds of appetites or lusts that human beings naturally experience and without which they cannot live in their fallen state. A rational will, as Anselm calls it, has the freedom to consent or not consent to a desire. It is the will’s consent that is decisive in moral evaluation, as is clearly seen in Anselm and Abelard. Following Augustine, Abelard emphasises that the performance of the deed adds nothing to increase the moral wrongness of the will’s evil choice or consent; the consent means that one is ready to act if there is an opportunity (**a**, **b**). See also Augustine, *De libero arbitrio* I.3. Augustine’s conception of concupiscence is discussed in Nisula 2012.

There were Augustinian ideas of freedom in the background of these discussions: the will is under no necessity to will and the will itself does whatever it does by willing; it would not will if it were unwilling (*De civitate Dei* V.10). Anselm pays attention to the fact that there are many things which may happen to us without our willing and which cannot force us to will them. One cannot will if one is unwilling to will (**c**). This Augustinian principle concerns iterative will: when one wills to will something one also wills it and vice versa (see Augustine, *Confessiones* VIII.9.21). Bernard of Clairvaux, whose treatise *De gratia et libero arbitrio* was very influential, highlights the inner structure of consistency included in the will itself as a rational power of movement: the will cannot but obey itself, ‘for no-one does not will what he wills or wills what he does not will’ (**f**).

Abelard argues that the consent is always free and in our power (**d**, see also *Scito te ipsum* I (11.270–273)). Anselm maintains in *De libertate arbitrii* that

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freedom of choice is needed for the accountability of human deeds. However, the definition of freedom has to be applicable to all beings which have will and reason, i.e., to human beings, to angels, and to God. Therefore freedom of choice cannot be defined as the ability to sin and not to sin, but it has to be conducive to justice. Anselm defines justice as ‘rectitude of will kept for its own sake’ (*De veritate* 12). The freedom of choice is defined as ‘the ability to keep rectitude of will for the sake of rectitude itself’, that is, the ability of rational creatures to keep justice (e). Bernard’s treatise *De gratia et libero arbitrio* involves an often-quoted distinction between freedom of nature, freedom of grace, and freedom of glory. The first one refers to the freedom from necessity, the second from sin, and the third from sorrow (f). Lombard refers to the philosophical treatments which define free decision as the free judgement of the will (g).

3 Thomas Aquinas on Will and Reason

a. Will is a rational appetite. However, there is no appetite except for a good, because an appetite is nothing but one’s inclination towards something that is desired. Inclination for itself is only towards something that is matching and convenient. Therefore, since all things, as far as they are beings and substances, are some goods, it is necessary that every inclination is towards something good. This is why Aristotle says in book I of his *Ethics* that the good is that which all desire ... For the will to be bent to some object, it is not required that that object be good in reality, but only that it be perceived as a good. Therefore, Aristotle says in book II of his *Physics* that the end is a good or a seeming good. (Thomas Aquinas, *Summa theologiae* II-1.8.1)

b. To the second, it should be said that the first thing which is found in matters of understanding and will is from nature and from this others are derived. Thus the knowledge of conclusions is derived from naturally known principles and our choice of means is derived from the volition of an end which is naturally desired. (Thomas Aquinas, *Summa theologiae* II-1.17.9, ad. 2)

c. As the object of sight is that which is actually coloured, so the object of will is good. Thus, if the will be offered an object which is universally good and good in all respects, the will is necessarily bent towards it, if only it wills something, because it could not will the opposite ... that good alone which is complete and which lacks nothing is a good the will is unable not to want: such good is beatitude ... the ultimate end moves the will necessarily because it is the perfect good. And the same applies to those things which are arranged to this end and without which the end cannot be achieved, such as ‘to be’ and ‘to live’ and things of these kinds. (Thomas Aquinas, *Summa theologiae* II-1.10.2, ad 3)

d. I answer that it is necessary that whatever human beings desire they desire it for the ultimate end. This is evident for two reasons. First, because whatever human beings desire, they desire it under the aspect of the good. And if they do not desire it as their perfect good, which is the ultimate end, it is necessary that they desire it as tending to the perfect good, because the beginning of anything is always ordained to its completion; as is clearly the case in the effects of nature and of art. Wherefore every beginning of perfection is ordained to complete perfection which is achieved through the ultimate end. (Thomas Aquinas, *Summa theologiae* II-1.1.6)

e. One need not always be thinking of the ultimate end, whenever one desires or does something, for the power of the first intention, which pertains to the ultimate end, remains in every desire directed to any object, even if one is not actually thinking about the ultimate end. Thus when one is walking along the road, one does not need to be thinking of the end at every step. (Thomas Aquinas, *Summa theologiae* II-1.1.6, ad 3)

f. It is obvious that every appetite is for some end, for it is silly to say that someone desires for the sake of desiring; desiring is a kind of movement which tends to something else. But that for which there is an appetite, namely the object of appetite, is the starting point of practical intellect, for what is first the object of appetite is the end whence the deliberation of practical intellect begins. For when we wish to deliberate about what is to be done, we first lay down the end and then proceed in an orderly way to the investigation of the means to the end, proceeding in this way from posterior to prior until we reach that which is to be done in the beginning. So he [Aristotle] adds that the last thing in the action of practical intellect is the starting point of action, i.e., that from which we should begin the action. Therefore it is reasonably asserted that the motive principles are these two, appetite and practical intellect. For since the object of appetite itself, which is the first thing considered by practical intellect, incites movement, it is for this reason that practical intellect is said to incite movement, namely because its starting point, which is the object of appetite, incites movement. (Thomas Aquinas, *Sentencia De anima* III.15, n. 4)

g. Now it is evident that, in a sense, reason precedes the will and ordains its act in so far as the will tends to its object, according to the order of reason, since the apprehensive power presents the object to the appetite. Accordingly, that act whereby the will tends to something proposed to it as being good, through being ordained to the end by the reason, is materially an act of the will, but formally an act of the reason. Now in such matters the substance of the act is as the matter in comparison to the order imposed by the higher power. Wherefore choice is substantially not an act of the reason but of the will: for choice is accomplished in a certain movement of the soul towards the good which is chosen. Consequently it is evidently an act of the appetitive power. (Thomas Aquinas, *Summa theologiae* II-1.13.1)

h. I answer that consent means applying appetitive movement to what is within the power of that who applies, the order of action being as follows. First, one should apprehend the end. Next it is desired. Then the means of obtaining it are deliberated about, and then the means are desired. The appetite tends to the last end naturally,

and therefore the application of the appetitive movement to the apprehended end has not the nature of consent but that of simple will. However, those which come [to be considered] after the last end and are directed to the end, come under deliberation, and accordingly are matters for consent, in so far as appetitive movement is applied to what has been judged on the basis of deliberation. But the appetitive movement toward the end is not applied by means of deliberation, but rather deliberation is applied by means of it, because it is presupposed in the deliberation that the end is desired. But desiring the means of obtaining the end presupposes the result of deliberation. Therefore, the application of the appetitive movement to that result is what consent properly means. Hence, since deliberation concerns only the means of obtaining the end, consent, properly speaking, concerns only the means of obtaining the end. (Thomas Aquinas, *Summa theologiae* II-1.15.3)

i. Some power of the soul can be in potency to different things in two ways: in one way, for its being or not being in action; in another way, for its being in action in this or that way. For example, the power of seeing sometimes actually sees something, and sometimes does not see; and sometimes it sees white, but sometimes black. Thus, it needs that which moves in two ways, namely, for the exercise or use of its act, and for the determination of its act. The first aspect concerns the subject: it is sometimes active and sometimes not. The second aspect concerns the object so that the specification of the act is in accordance with it. (Thomas Aquinas, *Summa theologiae* II-1.9.1)

Thomas Aquinas regards will as a rational appetite or inclination for the end which is or seems to be good for someone desiring it. Actually, there is no inclination except towards something good and, as Aristotle says, good is that which all desire (**a**). For Aquinas's ethics in the broader context of his theory of human nature and action, see DeYoung et al. 2009. The starting point in all understanding and volition comes from nature: First, the knowledge of conclusions is based on principles that are naturally known by reason. Secondly, the choice of means is based on the volition of an end that is naturally desired (**b**).

Aquinas claims that beatitude as an ultimate and perfect end is the universally good object which the will is unable not to want. It moves the will necessarily; the will is also moved necessarily by whatever is indispensable to the possession of the ultimate end, like being and living (**c**). Aquinas emphasises that whatever one desires, one does so under the aspect of the good or as tending to the perfect good. Since the beginning of anything is aimed at its completion, the beginning of perfection is aimed at its complete perfection, which is achievable through the ultimate end (**d**). However important the role of the ultimate end is, Aquinas does not claim that one must continuously think about it, just as one need not think about the end at every step while walking along the road. Namely, the volition of the ultimate end – which is naturally desired (see **b**) – remains in force in every desire directed to any object (**e**).

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In his commentary on Aristotle's *De anima*, Aquinas explains the course of an action through which a desired end is obtained. Movement in this process is produced by appetite and practical intellect as follows. At the very beginning, there has to be the object of appetite, which is the first thing apprehended by practical intellect. This object is the starting point for practical intellect's deliberation. The end is first settled on and thereafter the investigation concerning the means of achieving that end follows. The primary source of movement is the object of appetite itself. The practical intellect is said to produce movement since the object produces movement. The source of action is included in the result of practical intellect's consideration, from where the action should begin (**f**). According to Aquinas, reason (i.e. practical intellect) precedes will (i.e. rational appetite, see **a**), since it is the apprehensive power which presents the object to the appetite and ordains the will's tending to the object. Therefore, rational appetite for a good is materially an act of the will but formally an act of the reason. It is an act of the will as much as regards the substance of the act; but it is an act of the reason through its being ordained to the end by the higher power of reason (**g**). The rational appetite's inclination towards the ultimate end is natural; it is not a choice. However, those things which are directed to the end are matters of deliberation and matters for choice. The deliberation and choice accordingly concern only the means of obtaining the end. Reason produces the considered choice of the will (**h**; see also 15.3, ad. 3).

Aquinas considers the will's motion both with respect to the exercise of its activity (*quantum ad exercitium actus*), and with respect to the determination of its act (*quantum ad determinationem actus*). The first implies that the act of willing an end does not continuously reside in the will, although the power of willing does. The will can then be in action or not be in action (*quantum ad agere vel non agere*). The will moves the intellect in the sense that the will's choice requires the specification by the intellect. The intellect moves the will with respect to the determination or specification of the act (*quantum ad determinationem actus*) under the aspect of the good, which occurs in the process wholly dependent on the end apprehended by reason and on the means for that end deliberated by reason (**i**, see also **f–h**; *Summa theologiae* II-1.9.1, ad. 3; 9.3; 10.2; *De malo* 6).

4 Voluntaristic Conceptions of Will and Reason

a. It has to be known that two things are required for an act of choice, namely, that the intellect puts forward two things for election, and that the will prefers the one of them; and if this election is to be virtuous, the will must freely prefer the alternative

which the consideration of the reason has judged to be the better. However, it does not have to prefer that alternative without qualification, contrary to what those thinkers claim. (Henry of Ghent, *Quodlibet* I.16 (104))

b. If a bad and a good alternative are proposed, the will can choose the bad one on the basis of a defective principle of this kind. (It is chosen, however, as it appears good in some sense, since the will cannot choose or will anything at all, either by a good or a bad choice, except under the aspect of the good). If a more good and a less good alternative are proposed, the will can choose the one which is less good; and if the alternatives are equally good, the will can prefer one of them, as in Augustine's example where, of two persons with an equal disposition, when the same thing is proposed to them, one of them can choose it, and the other reject it. (Henry of Ghent, *Quodlibet* I.16 (110))

c. Three aspects are required for free acts, and they can exist only when the free choice remains in a sublime, powerful and elevated consistency over itself, over its object and over inferior powers. Namely, there is required one aspect through which it is directed towards an object, and another aspect through which it is directed to itself, like an agent is directed to the thing acted upon, since it can move itself only if it is first directed to itself, like a mover to what is moved. But its act is not free unless it comes from it moving itself freely, as will be made clear in the other questions below. Then it appears that it moves itself freely only if it can refrain itself from that movement. Also a third aspect is required, at least in preparedness, so that it at least can be immediately had; by this aspect, it is directed to itself as to an object, or at least can turn to itself and to its act like to an object. For we never will anything freely unless we will that we will or at least are immediately able to will this act. Both the second and the third aspect are said to be one's reflexive act about oneself but particularly the latter one, while the former aspect is particularly said to be the consistency of the free choice in itself or over itself. And these two aspects cannot be had unless there first is the aspect which directly intends an object. (Peter John Olivi, *Quaestiones in secundum librum Sententiarum* 59 (II, 552–553))

d. However, according to this logical possibility the will does not have acts successively, but in the same instant, for in the same instant in which the will has one act of willing, it can have an opposite act of willing with respect to that same instant ... There is a real potency which corresponds to this logical possibility, for every cause is prior in understanding to its effect. Thus the will, in that instant in which it elicits an act of willing, is naturally prior to its volition and is freely related to it. Hence, in that instant in which it elicits a volition, it is contingently related to willing and to not-willing, not because it had a contingent relation to willing at some earlier time, since then it was not a cause, but now, when it is a cause which elicits an act of willing, it has a contingent relation to the act, so that what wills *a* can not-will *a*. (John Duns Scotus, *Lectura* I.39.1–5, nn. 50–51 (ed. Vat. 17, 495))

e. What I call freedom is the power through which I can indifferently and contingently posit diverse things so that I can both cause and not cause the same effect, when there is not any difference somewhere outside this power ... However, it [the freedom of the will] can be known evidently through experience, since a human being experiences that, no matter how much reason dictates something, the will can will or not will or will against that. (William of Ockham, *Quodlibeta septem* I.16 (OTh 9, 87.12–88.28))

f. ... if somebody wills to get well effectively and knows that he cannot get well without drinking a bitter potion, the will is necessitated to will a bitter potion. And is not in his power not to will this potion, without qualification, as long as the situation remains as described, even though he could will the bitter potion in a contingent way by giving up the effective willing. (William of Ockham, *Quaestiones variae* 6.9 (OTh 8, 259.168–173))

g. ... volition is twofold: one simple, which is a kind of an act of liking an object; the other is efficacious, by which the person, if not impeded, pursues what is wanted in itself. Only the second volition is properly an 'election', as the Philosopher applies this term in the third book of his *Ethics*: 'Will can be about the impossible but election cannot', for no one chooses that which is impossible, i.e., no one efficaciously wills it in the sense of pursuing it as a result of such a volition, although one could will that which is impossible by an act of simple liking. (Perhaps the first angel sinned or could have sinned in this way, willing that which is impossible, i.e., equality with God.) Hence one could say that in those who have a sensitive appetite, the will can be a principle of many elections in regard to moral good, and this efficacious volition is 'election'. (John Duns Scotus, *Ordinatio* III.33 (ed. Vat. 10, 167.386–168.397))

h. But an agent is said to act freely by freedom of opposition when it, in doing something, is not pre-necessitated to do it by anything else or by any concurrence of other things, but with all other things (apart from the action itself) being the same as they are when it begins to act and remaining thus, it is possible for it not to act or perhaps to do the opposite. The question of whether this manner of acting freely is possible has been given a sufficient affirmative answer in Questions 1 and 2 of Book III. There it was determined that the will is free with this freedom, that no other power of the soul is freer than the will, and that the acts of willing and willing against, i.e., volition and nolition, are the first acts of which we are lords in this manner of freedom and lordship. (John Buridan, *Quaestiones super decem libros Ethicorum* X.2 (205va))

i. But the will can freely accept this act without rejecting the opposite or reject it without accepting the opposite, or even neither reject nor accept it but defer, as it seems to me all people can experience in themselves. (John Buridan, *Quaestiones super decem libros Ethicorum* III.3 (42va))

According to Henry of Ghent, the will as a free power can choose between the two alternatives proposed by the reason (a). It can even choose the minor good, because even that can be chosen as containing something good (*sub ratione boni*) (b). Peter John Olivi emphasises the will's role as producing reflexive mental acts. According to him, there are three aspects in a free act of the will. First, an object must be knowable so that it forms a *sine qua non* cause of volition. (This was a common view among the voluntarists; see also Henry of Ghent, *Quodlibet* XII.26 (156–157).) Second, it is the will alone which makes itself will this object. Thirdly, the will has to accept its own volition, which does not mean that the will must always actually do so. This second-order act of 'willing that one wills' is required for the freedom of the first-order choice: one cannot be said to have made a choice freely, if one would not have chosen to make that choice (c). See also Yrjönsuuri 2002, 99–128; Kent 1995. John Duns Scotus stresses the idea of the will as the efficient cause of its acts, too. According to Scotus, the possibility of willing different objects pertains to the will so that in the very same instant in which it elicits an act of willing *a*, it can have an act of willing-against *a*. Besides this, the will can suspend itself from eliciting any particular act in regard to an object proposed as good, as anyone can experience in himself (d; see also Scotus, *Reportatio Parisiensis* II.25, n. 15, 16, 20 (ed. Wadding 11.1, 370–371); *Ordinatio* IV, suppl. 49, 9–10, in Wolter 1986, 194). The will is contingently related to its acts of which it is the cause. This means that it is a free cause (*causa liber*) (see Dumont 2001). William of Ockham also appeals to the human experience as showing that the will as a free power can will (*velle*) or not will (*non velle*) or will against (*nolle*) some knowable object independently of the dictate of reason (e). See also Ockham, *Reportatio* IV.16 (OTh 7, 359.3–10); *Ordinatio*, prologus 10 (OTh 1, 285.23–287.2); Holopainen 1991.

Scotus and Ockham differentiated elections as effective volitions from the acts of liking (*complacentia*) and dislike (*displicentia*) as non-effective volitions, in which the will reacts with favour or disfavour to various objects, but which reactions – although free – do not yet produce what the will wills (g; see also Ockham, *Reportatio* IV.16 (OTh 7, 358.13–20)). In effective volition, the willing of some end is willed in such a way that if one knows (or believes) some means to be the only way of obtaining that end, one also wills that means (f). The will is now necessitated to want the means for the sake of the end by its free volition of the end and the knowledge of the necessary means for that end, but the will can still free itself by giving up the effective willing of the end; see Ockham, *Quaestiones variae* 4 (OTh 8, 126.598–607); on the discussion of liking and dislike in Ockham, see Hirvonen 2004, 146–148. John Buridan discussed the phenomenon of *complacentia* and *displicentia* in a different way. According to him, they are the primary orientations of the will and, accordingly, the proper acts of the will.

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However, they are not free acts but acts of the free will, because the will can freely accept or reject them (see John Buridan, *Quaestiones super decem libros Ethicorum* X.2 (205va–206ra)). Scotus considers acts of liking and dislike in connection with the will's ability to reflect its own choices and the results of these choices. This brings them into the sphere of freedom, e.g., as follows. Although the will freely reacts with favour to its choice, it still can react with disfavour to the object of that choice (see *Reportatio Parisiensis* I.1.3, n. 3 (ed. Wadding 11.1, 26); on Scotus's and Buridan's views, see Knuuttila 2006, 268–274).

Buridan discusses the manner of acting freely by freedom of opposition in a way which resembles Scotus's view (see **d**), although Buridan speaks of an agent acting freely and not of the will willing freely. He also seems to hesitate about whether an agent, when it begins and continues to act in some way, could also act in the contrary way. It is possible, however, that the agent would not act at all (**h**). Elsewhere he says that the will cannot choose against a certain judgement of reason, but whenever the reasoned suggestion is not certain, one can always postpone the choice (**i**; see also John Buridan, *Quaestiones super decem libros Ethicorum* VII.8 (145rb–va); X.5 (213va–vb)). See also Lagerlund 2002.

5 Weakness of Will

a. An incontinent person acts from concupiscence and not from choice in accordance to reason. Contrary to this, a continent person acts from choice and not from concupiscence, for the incontinent person is that who under the pressure of passion and temptation is lead into evil when the reason judges otherwise, and therefore acts against the judgement of reason. (Albert the Great, *Ethica* III.1.14 (214))

b. In the same way as the parts of the body are said to be inordinate when they do not follow the order of nature, the parts of the soul are said to be inordinate when they are not subdued by the order of the reason, for the reason is the leading power of the parts of the soul. Therefore, when the concupiscible or irascible is affected by a passion outside the order of the reason and an impediment of the right human action is produced in this way, the sin is said to be from infirmity. (Thomas Aquinas, *Summa theologiae* II-1.77.3)

c. ... when someone is said to sin on account of something, it is implied that 'something' is the first starting point of the sin. However, in the person who sins on account of infirmity, bad will is not the starting point of the sin but it is caused by a passion. But in the person who sins on account of malice, it is the bad willing which is the first starting point of the sin, because he is inclined to the bad willing through his own habit itself and not through some exterior starting point ... there can be

election in the sin of infirmity, too, but the election is not the first starting point of sinning, for it is caused by a passion. Therefore such a person is not said to sin on account of election, although he sins with election. (Thomas Aquinas, *De malo* 3.12, ad 5, ad 11)

d. ... someone who has universal knowledge can be impeded by some passion so that he is not able to put forward a minor premise related to this universal knowledge and reach the relevant conclusion. Instead, he puts forward a minor premise related to another universal claim which the passion's inclination suggests to him and concludes under it. Aristotle speaks about this in the seventh book of *Ethics* and says that the incontinent has in his syllogism four propositions of which two are universal, one being a proposition of reason, like 'adultery should not be committed', and another a proposition of passion, like 'pleasure should be sought'. Passion, then, binds the reason so that it does not put forward a minor premise and conclude under the former proposition but under the latter, as long as the passion endures. (Thomas Aquinas, *Summa theologiae* II-1.77.2, ad 4)

e. ... It can be said that [evil] may blind the intellect in two ways, privatively and positively. It prevents privatively, when it turns the intellect away from right consideration; for the will which chooses the opposite of what is rightly dictated does not allow the intellect to remain for long in its right dictate, but turns its consideration to seek after sophisticated or probable reasons for the opposite; or at least to some other irrelevant matter, lest that actual displeasure remain which consists of the remorse of choosing the opposite of what one knows to be right. It blinds positively as follows ... when the will chooses a bad end for itself ... it commands the intellect to consider the means which are necessary for reaching such a goal ... the evil will blinds, not by making the intellect err regarding some complex, but by making it perform an act and develop a habit of considering some means for attaining a bad end ... (John Duns Scotus, *Ordinatio* III.36, nn. 72–75 (ed. Vat. 10, 249.468–251.509))

f. Even if it is not assumed that the created will can will evil *qua* evil, sinning from certain malice can be assigned to it. The will then sins from its freedom, without the influence of a passion of a sensitive appetite or an error of reason. (John Duns Scotus, *Ordinatio* II.43, n. 6 (ed. Vat. 8, 486.49–487.52))

g. If you claim that an incontinent person has two major premises, namely that 'nothing dishonourable should be done' and that 'everything enjoyable should be done', but accepts only the minor premise which is subordinate to the second major, for example, 'this is enjoyable', and therefore he only concludes on the basis of these premises that 'this should be done', I object to this as follows. It is impossible to assent simultaneously to these two major premises, because these assents are opposed to each other. In the same way, assuming that this is possible, the incontinent person can still evidently know the first major premise, the minor, and the conclusion and yet do the opposite; thus, he can do the opposite of what is dictated by right reason. (William of Ockham, *Quaestiones variae* 7.3 (OTh 8, 367. 604–612))

h. I reply that as long as the first volition [the act of willing continence] and right reason mentioned above [continence has to be willed] remain, it is impossible for

someone to will an act of incontinence because of formal repugnance. For if one wills an act of justice for the sake of honesty and precisely because it is so dictated by right reason, then, consequently, one necessarily wills everything dictated by right reason, as long as the first volition remains. Consequently, if reason dictates that one should behave continently for the sake of honesty, one necessarily wills that act. Thus, one cannot will simultaneously the opposite act, since acts in which opposites are willed are opposite. You might say, then, that this second volition in respect to continence is not a virtuous act, because it is not in the power of the will. I reply that it is virtuous in that one can suspend the first act. (William of Ockham, *Quaestiones variae* 7.3 (OTH 8, 353.287–305))

i. It can be said that an incontinent person moves toward contrary directions so that his appetite without the influence of passion inclines to avoiding wrong, and under the influence of passion to pursuing it. But he does not have both inclinations at once. Or, it could be said that the intellect judges simultaneously that one and the same thing is both pleasant and shameful. If so, the appetite immediately receives both liking for it because of pleasure, and dislike because of shamefulness. In this sense, liking and dislike are not opposites. But as the intellect cannot simultaneously judge that this totality must be both followed and avoided, so the appetite cannot simultaneously both accept and refute this totality. And as the intellect could judge that this totality should be pursued because of pleasure in which case the judgement remains weak, formidable or timid for the sake of apparent shamefulness, so the appetite could accept this totality, in which case the acceptance nevertheless remains weak and is connected with some dislike because of shamefulness; and, thus, the appetite is voluntary in a mixed way. (John Buridan, *Quaestiones in decem libros Ethicorum Aristotelis ad Nicomachum* VII.6 (143va))

In the Latin translation of Aristotle's *Nicomachean Ethics*, the term *akrasia* was rendered as *incontinentia*. Albert the Great defines the incontinent person as one who knows what should be done but follows the desire of the sensitive soul and acts in accordance with this irrational impulse (a). Aquinas shares this Aristotelian view of *akrasia* (b). For medieval interpretations of Aristotle's discussion of *akrasia*, see Saarinen 1994, 2002. Aquinas remarks that an incontinent person who acts wrongly out of weakness (*ex infirmitate*) does not do so out of malice (*ex malitia*). Doing wrongly is thus caused by a sensitive passion and not by bad will; an incontinent person acts 'with choice' (*eligens*), but not 'from choice' (*ex electione*). One would not have chosen that action without the passion's influence. A person who acts from choice, does so because of bad choice according to the vice of intemperance (c; see also *Summa theologiae* II-1.78.4, ad 3; II-2.156.1). Aquinas explains how it happens that the incontinent person, 'while choosing' (*eligens*), does not use the knowledge of what is right. He may have two practical syllogisms, one leading to the right action and

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another to the wrong. The major premise in the former is that ‘no fornication should be done’, and in the latter, ‘pleasure should be pursued’. The interruptive passion, now, ‘binds’ the reason to the effect that the person does not conclude under the major premise of the first syllogism but under the second (**d**). For Aquinas’s view of incontinence, see Saarinen 1994, 118–131; Knuuttila 2006, 263–264; Kent 2007.

Aquinas maintains that the rational will is necessarily orientated to happiness as the final end; therefore, akratic acts cannot be explained by a change in the will at this level. Instead of this, they have to be explained either by referring to irrational impulses or mistaken occurrent evaluations suggested by emotions. In the voluntaristic explanations, however, there is no problem explaining such acts by referring to the change in the will itself. John Duns Scotus gives quite an active role to the will to explain how a person can, in some situations, will something other than what is prudential or in conformity with the dictate of right reason. The will may lead the intellect to consider reasons why one need not act in a right way. This may also help to minimise an unpleasant feeling (*displicentia*) associated with the choice against what is known to be right (**e**). A person may incontinently choose false things when the will is occurrently inclined to a wrong end by a passion, but it can also choose from malice, without such weakening affects (**f**).

William of Ockham follows the voluntaristic line represented by Scotus. A person can act against what he knows to be right in some particular situation without assuming any weakening in the cognitive component concerning right or prudential action (**g**). Ockham actually criticises the way Aquinas has explained an incontinent action (**d** above; see also Holopainen 2006). One cannot simultaneously assent to two contrary major premises, but if this is assumed to be possible, the incontinent person can know the premises and the conclusion of the first syllogism and yet do the opposite of what is dictated by right reason. Ockham’s view of akratic action is not founded on the occasional dazzling or binding of the intellect; the defect is rather in the will in a way that becomes obvious in connection with Ockham’s view of efficient volition: if one wants an end efficaciously, one also wants the means which one believes to be necessary for obtaining the end. Granted that this kind of commitment to the right end is in force, how is it possible that the person freely makes a wrong choice and acts wrongly or incontinently in conformity with it? The answer is found in giving up the efficient volition (see **4f**); the incontinent person can suspend the first act of willing the right end by choosing wrongly what could not be done as long as the right end is willed (**h**).

According to Buridan, the intellect can judge simultaneously that one and the same thing is both pleasant and shameful, with the effect that both an act of liking and an act of dislike arise in the will, the first one because of pleasure and the second one because of shamefulness. These first movements of the will are not free in Buridan. The intellect cannot judge that it should be both

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pursued and avoided simultaneously, but it can judge that it should be pursued for the sake of pleasure. In this case, the judgement of reason remains weak and timid, and the acceptance of the will, accordingly, also remains weak and is accompanied by some act of dislike for the sake of shamefulness. The will is then mixed. The incontinent person, who normally is inclined to avoid wrong under guidance of reason, now – under the influence of some passion – chooses it and does it as directed by reason which, however, is not certain and consequently does not necessitate the will (i). For Buridan's view of incontinence, see Saarinen 1994, 161–185; see also Saarinen 2003, 749–765.

Chapter 33

Will and Freedom in Renaissance and Reformation Thought

Risto Saarinen

Thomas Aquinas remains a prominent philosophical authority both in the Renaissance and during the Catholic Reform. His Aristotelian view of action, in which the practical syllogism is the tool for deliberation, prompting intentional action, remains a standard view of academic teaching in Italian, French and German universities. The conclusion of this syllogism was often considered identical with action; therefore, will and choice normally transform the result of intellectual deliberation into action. Some Aristotelians employ Walter Burley's modified intellectualist account, according to which the conclusion of the practical syllogism is a sentence which is followed by choice and action. In all intellectualist accounts the will is regarded as rational appetite; its freedom consists in its ability to act rationally (1).

Voluntarist theories of action also abound in the Renaissance and during the early modern period. They tend to be more innovative and varied than the standard Thomist account. Petrarch discusses in detail the allegedly Augustinian claim that a person can do what he or she wills. Although Petrarch regards such a strong version of voluntarism with skepticism, his own account of human action in many ways follows late medieval voluntarist patterns. John Buridan's moderate voluntarism, which distinguishes between the first and second acts of the will and asserts that the will has at least a preliminary freedom not to choose (*non velle*) the most reasonable option, also remains influential. In early sixteenth century Germany, this view is even called the 'Catholic' way of speaking. In Paris, John Mair refines Buridan's account, claiming that 'this should not be done' (as a moral judgement) and 'this should be done' (as an effective indicative) are compossible (2). The voluntarist trend pays increasing attention to various psychological problems of inner conflict (see below under 4).

The European Reformations of the sixteenth century develop religious psychology regarding the issues of will and freedom. The appeal to conscience and its alleged

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freedom is one of the main tenets of Martin Luther and John Calvin. While traditional views treat conscience as the virtue of recognising universal norms, the Reformation theologians argue that individual conscience is free and its conviction need not be shared by all people or the official teaching of the church. Although Luther argues that persons remain free in the inner sphere of receiving and thinking, he denies the capacity of *liberum arbitrium* (free decision, free will) to produce inherently good and virtuous actions by itself. Since pure virtues and merits can only be gained through appealing to God human aspirations remain impure and imperfect. This religious view of freedom and will is systematically worked out in Lambert Daneau's Calvinist textbook which establishes ethics as a theological discipline. According to Daneau, only the human mind renewed by the Holy Spirit can achieve partially successful moral conduct. Following Aristotle's vocabulary of imperfect virtue in the *Nicomachean Ethics* 7, Daneau labels this religious achievement as 'continence' (3).

The activities of the will are increasingly portrayed within the framework of inner mental conflict which may take place between different partners, such as competing reasons, reason vs. emotion, competing emotions, will vs. emotions and, in a particularly dramatic manner, between two wills (see below under **5d**). The conflict is typically portrayed as struggle (*pugna*) or wrestling (*lucta*); because of the continuing struggle, some reluctance (*repugnantia*) often colours the human conduct. In the scholastic traditions of intellectualism and voluntarism, the inner conflict occurs between two syllogistic structures and between the rational and sensitive parts of the soul (**2b**). Since the influential textbook of Josse Clichtove, Medea's love (and sometimes her rage) is portrayed as the standard example of inner conflict. Philipp Melanchthon employs this picture to prove that will is higher than cognitive power (**4**). Melanchthon also depicts the inner conflict as the will's wrestling; Lambert Daneau follows this tradition in speaking of the wrestling virtue (*virtus luctans*) by which he means religiously coloured continence (**3c**).

The Aristotelian problem of weakness of will is closely related to the topic of inner struggle. While scholastic authors like John Versor still appeal to ignorance as the cause of weak-willed wrongdoing, early modern writers like Joachim Camerarius appeal to Medea's clear-eyed weakness and argue that the weak-willed person knows all options in the state of inner conflict. In analysing the inner struggle of the weak-willed person, Protestant authors tend to regard harmful emotions and bad affects as realities which already involve will and judgement. Religious psychology in this manner often complements the Aristotelian weakness of will with elements from Augustinianism, Stoicism and Neo-Stoicism (**5**).

1 Intellectualist Accounts

a. [In syllogisms,] one opinion concerns the universals and the other the singulars which are presented to the senses. And while in theoretical matters the deliberation consists of a universal and a singular so that the mind necessarily says and approves

the conclusion, in matters regarding action the deliberation proceeds from a known universal and singular to the conclusion so that the person must act if he can and is not prohibited. (Lefèvre d'Étaples, *X librorum moralium Aristotelis tres conversiones* VII.3, n.p.)

b. It is the case that one of them [the premises of practical syllogism] is a universal opinion, the other a singular opinion, pertaining to the singular actions to be taken, which concerns the senses. These two opinions result in a single opinion and a single sentence which the Philosopher [Aristotle in the *Nicomachean Ethics* 1147b9] understands to be the conclusion, not the minor proposition, as some expositors claim ... When a universal and a particular opinion are put forward, they generate a third opinion which is the conclusion, and it is executed as follows: everything sweet is to be tasted, this is sweet; and immediately comes the execution and pursuing of this which is the active conclusion. (Acciaiuoli, *Expositio super decem libros Ethicorum Aristotelis* VII.3 (335))

The doctrine of practical syllogism, introduced by Aristotle in the *Nicomachean Ethics* VII, provides a framework to discuss the details of deliberation and intentional action in the Thomist tradition of *via antiqua*. A standard formulation is, for example, the following: all pleasure should be pursued (major premise); this is pleasant (minor premise); this should be pursued (conclusion). A consistently intellectualist account interprets intentional action as a result of syllogistic deliberation. Intellectualist discussions may concern the interpretation of the syllogistic conclusion: while **(a)** considers it to be identical with action, **(b)** takes the view that the command to act is initially manifested in a propositional form. The first view is close to Thomas Aquinas; the second view has its origins in Walter Burley (Saarinen 1994; Wood 1999). Contemporary Aristotelian scholars (Charles 1984) continue to debate whether the 'last protasis' mentioned in the *Nicomachean Ethics* 1147b9 should be interpreted as minor premise **(a)** or as propositional conclusion **(b)**.

The persistent problem of a syllogistic theory of action is that it seems to leave no room for choice and free will. The influential *Condemnation of 1277* (Hissette 1977) demands that the agent should display some freedom, even within an intellectualist scheme of action. Late scholastic and early modern authors want to remain compatible with this demand; thus they often teach that additional consent or free will is needed to bring about an action (see **2** below). At the same time, the prevalence of the Aristotelian and Thomist view of action in the universities continues the tradition of intellectualism and syllogistic analysis of action. Even the Renaissance authors who use new translations and a Humanist style, like Acciaiuoli and Lefèvre, often continue to propagate standard views of action, following Aquinas **(a, b)** and Walter Burley **(b)**. (For Acciaiuoli and Lefèvre, see Lines 2002 and Saarinen 2011; for Aquinas, see, e.g., Pope 2002.)

2 Voluntarist Accounts

a. [i] A person who clearly and firmly recognises that he is miserable desires not to be miserable. [ii] When he has conceived this wish, he will pursue his goal. And [iii] when the person pursues this goal, he can also reach it. The truth of the third point follows from the truth of the second, and the second depends on the first. Therefore, the first sentence, which is the root of human salvation, needs to be sustained. (Petrarch, *Secretum*, 28)

b. [the will] has two kinds of acts. Of the first kind are the acts of liking and dislike which regard to which the will is not free. These acts are formed with natural necessity so that when a pleasant object is presented to the will, it wills, nills [i.e., wills not], and chooses it with the act of liking. Similarly, when a painful, ugly, or loathsome object is presented to the will, it chooses the act of dislike. In these acts the will does not act sinfully because it is not free with regard to them. According to both moral philosophy and the Catholic way of speaking, the sinful act proceeds from free decision insofar as the agent can consider other alternatives. And according to Augustine, sin is thus free; and if it does not occur freely, it cannot be sin. Of the second kind are those acts of the will which follow from the first ones. These are of two kinds, namely contrary and contradictory. The acts of willing and nilling, accepting and refusing, are contrary acts. In these acts, the will is not free towards both of them with regard to the same object, as it cannot both will and nill, or both accept and refuse ... But the will is free towards one of them, as it can will and accept the object which appears to be good. For it can also refrain from accepting it, suspending its own act. And with regard to bad objects, the will is free to nill and to refuse in the same manner, as the philosophers commonly teach. These are contradictory: to will, not to will; to refuse, not to refuse; to accept, not to accept. With regard to these alternatives, the will is free concerning its relevant object. (Usingen, *Parvulus philosophie naturalis* (113v))

c. In our proposition we can have different judgements about the same matter in such a way that they are in no way contrary and do not cause irreconcilable tensions: 'The woman is beautiful'; this consideration leads towards intercourse with her. The contrary syllogism is: 'Nothing shameful should be done; intercourse with her is shameful; therefore it should not be done.' This deliberation follows reason. On the other hand: 'Every beautiful woman gives occasion for intercourse; she is such; therefore [she gives occasion for intercourse].' There is no contrariety between the major premises; and we need not consider the minor premises, as they do not struggle with each other or with anything else ... I also say that these two are compossible: [i] 'Nothing shameful should be done', [and] [ii] 'Something shameful should be done', provided that we understand 'should be done' in the first case as pertaining to what is morally right, and in the second case as pertaining to the actual course of things. (John Mair, *In Ethicam Aristotelis Peripateticorum principis* VII.4 (110r))

In Petrarch, Augustine is supposed to be the champion of free and strong will (a). The argument resembles a similar discussion in Bernard of Clairvaux's *De gratia et libero arbitrio* which is a standard medieval description of the Christian position regarding free will. For Bernard, a person who says 'I want to have free will but cannot' already has a will. Such an expression of desire or wish already provides a freedom from necessity. The higher degree of freedom, 'freedom from misery' requires divine help but belongs to the order of salvation (*De gratia et libero arbitrio*, 1.2–2.4; 4.9–10). The ability to express a wish regarding a goal to be pursued establishes the first degree of freedom for both Bernard and Petrarch. This first degree is the root of all higher degrees of freedom which may require divine help. In the final pages of *Secretum*, the alter-ego of Petrarch, Francesco, nevertheless abandons the road proposed by Augustine, since on this road the will should be eradicated of all harmful emotions of love and glory. Francesco chooses a life with emotions and thus deliberately leaves his will imperfect.

Usingen basically follows the influential view of John Buridan (b). The option 'not to will' (*non velle*) is required by the Condemnation of 1277 (Hissette 1977, 251) as a necessary guarantee of the will's freedom. Buridan, Usingen and John Mair still follow the requirements of this condemnation. Mair adds to the Buridanian model the linguistic consideration that 'should be done' (*est faciendum*) can be understood in two different ways (c).

The discussion is, however, only superficially concerned with syllogistic matters. The philosophical issue in (b) and (c) focuses increasingly on the dynamic psychology of simultaneous contrary inclinations within one person. The Buridanian position considers that initial desires are not under human control (b). The person can and should, however, manifest his or her freedom through consenting to some proposals while refraining from others. The initial desires are nevertheless significant for the will's freedom, because only through them is the object introduced so that it 'appears to be good'. The technical Latin term for this requirement is that the object needs to appear *sub ratione boni*. If no such apparent goodness is attached to the object, it cannot be willed at all. (For voluntarism and Bernard of Clairvaux, see Kent 1995 and Müller 2009; for Usingen and Mair, see Lalla 2003 and Saarinen 2011. For Petrarch, see, e.g., Trinkaus 1979.)

3 Religious Psychology

a. The believers' consciences have received the privilege of their freedom, which we previously described. By the beneficial work of Christ they have now also acquired the state in which they should not be bound with any observances in those matters

in which the Lord has willed them to be free. Therefore we conclude that they are released from the power of all men. For Christ should not be deprived of our gratitude for his great generosity, and the consciences should receive their reward. (Calvin, *Institutes* III.19.14)

b. Human will is placed between God and Satan like a beast of burden. If God rides it, it wills and goes where God wills ... if Satan rides it, it wills and goes where Satan wills; the will does not have the freedom to run to one of the two riders or to seek one of them. (Luther, *De servo arbitrio* (635))

c. Not the human mind as such, but the human mind already renewed [through the Holy Spirit] may be capable of this virtue which we call continence and the wrestling virtue. Only this kind of virtue can exist in our worthless person so that we can be its seat and subject, as the schoolmen say. (Daneau, *Ethices Christianae* (107r))

The European Reformations of the sixteenth century appeal to the freedom of the individual. This is often called the freedom of conscience by which the believer is ‘released from the power of all men’ (**a**). Conscience thus becomes a realm of inner freedom; its activities resemble the freely flowing and particular exchanges of hospitality, generosity and gratitude rather than the strict and universal rules of legal and political obedience. In some sense this account of conscience resembles Bernard’s (cf. above) idea of freedom from necessity as the inner freedom of wish and desire (Baylor 1977; Müller 2009). Religious psychology of human freedom often follows the cultural pattern of gift exchange which is popular in the sixteenth century (Zemon Davis 2000).

While Bernard (*De gratia*) and Petrarch’s Augustine (**2a**) assert that external freedom grows organically and with divine help from the inner freedom of thinking and wishing, Lutheran and Calvinist Reformers tend to deny the power of free will. The Augustinian phrase *liberum arbitrium* becomes translated as ‘free will’ in vernacular languages, for instance in the German Lutheran *Augsburg Confession*. According to Martin Luther, human will is radically heteronomous and remains possessed by external powers (**b**). In Protestant religious psychology, the bondage of the will thus coexists with the freedom of conscience. While Luther and Calvin also use God’s foreknowledge to establish a theological view of predestination, their action theory need not be considered fully deterministic, since the human will voluntarily obeys heteronomous external powers (Saarinen 2011; see also Kolb 2005 for Luther).

Although humans can be renewed by the work of the Holy Spirit, their will nevertheless remains incapable of reaching pure virtue in earthly life. The renewed will continues to wrestle with sin and can only achieve continence (**c**). In the Aristotelian tradition of the *Nicomachean Ethics* VII, ‘continence’ means that state of half-virtue in which a person can reach the good goal but only with inner reluctance. (For Luther and Calvin, see e.g. Oberman 1989; Kolb 2005; Helm 2004; McKim 2004; for Daneau, see Strohm 1996.)

4 Inner Conflict

a. [Medea in Ovid] first reflects whether she should, after deserting her father and birthright, follow the foreign stranger Jason whose vehement love has captivated her. But finally she surrenders to the perturbation of love and is overcome by passion. In her deliberation one can distinguish between reason and sensitive appetite as follows: Reason: ‘Come, thrust from your maiden breast these flames that you feel, if you can, unhappy girl. Ah, if I could, I should be more myself.’ Passion: ‘But some strange power holds me down against my will. Desire persuades me one way, reason another. I see the better and approve of it, but I follow the worse.’ (Josse Clichtove, *Artificialis introductio in X libros ethicorum* (37 r))

b. But here we realise and deplore our infirmity: the will and heart can shamefully overrule the judgement of the cognitive power, as Medea says: ‘I see the better and approve of it, but follow the worse.’ The will of Roman gladiators receives the blows against the judgement of the mind – for the will can resist the right judgement. It also happens that the demons move the hearts so that the minds become furious and the judgement of the cognitive part is obscured ... Because of such events it cannot be said that the natural light would be extinct in these people or, even less, in other healthy persons. But the demons move the nature deserted by God violently. (Philipp Melanchthon, *Liber de anima* (141))

The inner conflict of mind is an ancient topic (Price 1994) which again becomes fashionable in the Renaissance and the Reformation. Although the new accounts no longer employ logical and semantic considerations (cf. **2b** and **2c**), they make use of the medieval Aristotelian distinction between rational and appetitive powers. Theological variants of the inner conflict often employ the Pauline struggle between spirit and flesh, in particular as it appears in Romans 7–8 (Westerholm 2004). Philipp Melanchthon typically describes such struggle as the will’s wrestling (*lucta*, e.g. *Loci communes*, 376). In **4b** he is also influenced by the medical tradition which postulates vital spirits and demons in human blood and nerves (Kusukawa 1995).

Both Clichtove (**a**) and Melanchthon (**b**) are anti-intellectualist (cf. **1**) in the sense that, in their view, reason and cognitive powers can be overcome by will and emotions. Medea’s words especially (‘I see the better and approve it’ (Ovid, *Metamorphoses* 7)) challenge both intellectualist and voluntarist interpretations, as Medea is moved to her action contrary to her knowledge and approval. Melanchthon nevertheless leans towards a fairly strong variant of voluntarism when he asserts that ‘the will can resist the right judgement’. On the one hand, Melanchthon thinks that God is operative in the strivings of a Christian; on the other hand, an agent who wrestles must be a real agent and person, not merely an involuntary instrument of a higher power. Such a view of wrestling modifies but does not in this way mitigate the Protestant doctrine of ‘the bondage of the will’ (cf. Luther **3b** and Daneau **3c**).

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The theme of inner struggle and wrestling continues to be prominent in early modern philosophy. It is sometimes connected with the Neo-Stoic struggle against harmful perturbations (Abel 1978; Strohm 2005). One important consequence of the view of life as continual struggle is that the agent seldom reaches full clarity regarding the nature of his own motives. Some inner confusion and suspense remains within the agent who acts in the state of relative uncertainty.

5 Weakness of Will

a. When the person has permanent and clear right reason which actually pertains to both the major and minor premise, it is not possible to act incontinently. But when the permanent right reason actually pertains to the major premise, it is possible to act incontinently ... For the major and minor in a practical syllogism yield an action as conclusion. If the minor is put under the major the conclusion is immediately known ... [but] reason is not completely extinguished in the incontinent person. Although he has the true knowledge of the universal – for instance, if he possesses this universal proposition of the reason: nothing sweet is to be tasted, and concupiscentia also says: everything sweet is pleasant – the appetitive passion then captures the judgement of the reason regarding the minor premise and subsumes it under the universal provided by the appetite, not under the universal of the reason, and so the incontinent action emerges. (John Versor, *Quaestiones* VII.4 (59 ra-rb))

b. How is it said that the akratic person ignores the best alternative? She knows and sees, but does not follow nor persevere, according to Medea's confession which we quoted elsewhere. And the comical complaint of the youngster: being prudent, knowing, living, and seeing I am ruined; I do not know what I am doing, and other similar sayings. A fine picture of this tension and struggle given in Plato's *Phaedros* is the horses and charioteer. Examples of lovers are given in the comedies. More or less everyone experiences this in everyday life, so that no more needs to be said. (Joachim Camerarius, *Explicatio librorum Ethicorum ad Nicomachum* VII.2 (317))

c. The [akratic] argument goes as follows: this desire is harmful. Harmful things are to be avoided. Therefore, one should not be seized by this desire. But covetousness carries the person away, so that he is ordered by this last proposition concerning perception: this is pleasant and joyful. Therefore I enjoy the present pleasure. The person does not want to hear or follow the knowledge-based truth which argues that such deeds are wicked and blameworthy. In the same manner one can explain other cases in which one acts against true knowledge and right reason. (Joachim Camerarius, *Explicatio librorum Ethicorum ad Nicomachum* VII.3 (326))

d. When the bad will of the mind overcomes the virtue and the desire to act rightly, this state is called *akrateia*. In this state, virtue fights and struggles with vice, and vice with virtue. Clearly, we then perceive as if two persons and two wills were active in us. (Daneau, *Ethices Christianae* (104v))

John Versor expounds Aristotle's 'weakness of will' (incontinence, *akrasia*, *Nicomachean Ethics* 7), that is, the phenomenon of acting contrary to one's own better judgement (**a**). Versor follows the intellectualist and syllogistic account of Aristotle and Thomas Aquinas: a person who acts contrary to better judgement does not consider the minor premise of the practical syllogism properly. The Christian tradition is evident in the concept of concupiscence as harmful passion, but otherwise Versor's explanation does not need the concepts of will and choice in the explanation of *akrasia*. The Greek term *akrasia* and its medieval Latin translation *incontinentia* do not employ the concept of the will. Later voluntarist accounts, however, discuss free will and consent extensively in the context of *akrasia*.

The quotation from Joachim Camerarius shows how *akrasia* remains relevant and is even popularised in the early modern era (**b**). Camerarius translates *akrasia* as *impotentia animi* and connects it with the discussion on inner conflict (see 4). For him, *akrasia* is an everyday phenomenon common to all through personal experience. This is not merely a rhetorical consideration, but Camerarius employs the concepts of perception and experience to underline the common and, in a sense, empirical nature of this phenomenon. He employs Aristotle's syllogistic reasoning (**c**), but his final solution is fairly close to voluntarism: the akratic person does not want to hear the truth or follow it. Camerarius employs here the Latin verb *admitto*, meaning a conscious refusal to follow reason. He also underlines the clear-eyed nature of *akrasia* elsewhere (**b**): the person knows and sees and nevertheless says that he does not know. Although Camerarius aims to give a philosophically precise analysis of *akrasia*, this phenomenon becomes for him a literary type which illustrates the situation of inner conflict.

Lambert Daneau revives the old Augustinian (*Confessions* 8) topic of two wills, giving it a Neo-Stoic guise (**d**). In his variant of *akrasia*, the will plays a central role. In Daneau's view, the akratic impulse is already an assented judgement which has become the will of the person. This situation leads to a struggle, as if between two personal powers. The inner conflict thus grows towards a full-fledged dualism. (For 'weakness of will' in the history of philosophy, see Hoffmann-Müller-Perkams 2006; Hoffmann 2008; Müller 2009; Saarinen 2011).

Chapter 34

Will in Early Modern Philosophy

Mikko Yrjönsuuri

Early modern philosophy inherited from the Middle Ages various very elaborate concepts of the will. It seems that little philosophical depth was added to the analyses of these concepts during this period. Rather, it is characteristic of the early modern discussions that traditional distinctions and theories were re-evaluated in new contexts, among which the mechanical approach to natural philosophy is of particular importance. Many philosophers were opposed to what was called ‘scholastic subtlety’, and defended instead very straightforward theories of the will.

René Descartes and Thomas Hobbes were the two most important philosophers to emphasise the idea that the human body is a corporeal system following mechanical laws of nature. Both of them thought that all movements of animals, and most movements of humans, are explained through such mechanical systems. Hobbes did not see the need to postulate anything more to explain what is called free will. Descartes took the opposite view, claiming that humans have an incorporeal soul that has free will, which is not bound by mechanical laws of nature. He famously put forward the suggestion that free will can affect the activity of the brain by moving the pineal gland, without being a corporeal cause of this movement. It still remains unclear what kind of mover he thought the mind to be in this case (1).

The will was recognised as the human power for deliberation, but opinions were divided about whether it is a special power in any way in comparison to other animals. This is reflected also in approaches to determinist explanations assuming that human choice is as much necessitated as anything else in the world. Authors emphasising freedom of the will as distinctly human often also thought that the freedom of the will requires that its choices are not necessitated, at least not always. Contrary to scholastic faculty psychology, the will was seen as in no way distinct from the other parts of the soul. As John Locke made clear, it is not an agent as such (2).

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Twentieth century philosophers widely discussed whether determinism and free will are compatible. Origins of this problem have often been put in the early modern period. The early modern approaches are best understood through looking at two concepts much used in the period: spontaneity of an action and indifference of the will. Paradigmatically, an action was called spontaneous if it is caused by the will of the agent. According to some authors, this condition is roughly the realistic requirement for the action to be free. But many authors also considered indifference of the will in relation to the action. By this they meant that, at the very moment of acting, another choice is possible. This is usually thought to be incompatible with determinism but not always required for freedom. Many authors thought that, even when free, the will may be bound in the causal sense, if for no other reason than to aim for the perceived best.

Most early modern philosophers accepted the Thomist doctrine that the will is a power for good and everything sought by the will is sought because it is perceived to be good in some respect. It was evident to early modern thinkers that this doctrine needed revisions, but the underlying assumptions were not seriously challenged (3). Most early modern authors gave up the scholastic distinction between *passions* as appetitive acts of the sensory soul, and *the will* as producing the appetitive acts of the intellectual part of the soul. Consequently, the relationship between passions as causes for action, and volitions as causes for action needed re-evaluation. Medea's problem as formulated by Ovid was often taken up with different evaluations (4).

1 Voluntary Movements of the Mechanical Body

a. There be in animals two sorts of motions peculiar to them: One called vital, begun in generation, and continued without interruption through their whole life; such as are the course of the blood, the pulse, the breathing, the concoction, nutrition, excretion, etc.; to which motions there needs no help of imagination: the other is animal motion, otherwise called voluntary motion; as to go, to speak, to move any of our limbs, in such manner as is first fancied in our minds. That sense is motion in the organs and interior parts of man's body, caused by the action of the things we see, hear, etc., and that fancy is but the relics of the same motion, remaining after sense, has been already said in the first and second chapters. And because going, speaking, and the like voluntary motions depend always upon a precedent thought of whither, which way, and what, it is evident that the imagination is the first internal beginning of all voluntary motion ... These small beginnings of motion within the body of man, before they appear in walking, speaking, striking, and other visible actions, are commonly called endeavour. This endeavour, when it is toward something which causes it, is called appetite, or desire, the latter being the general name, and the other oftentimes restrained to signify the desire of food, namely hunger and thirst. And when the endeavour is from ward something, it is generally called aversion. (Hobbes, *Leviathan* I.6)

b. The most noteworthy thing in my view is that no movement could take place in the body, either ours or that of a brute animal, if there were not all the organs or instruments by which even a machine could produce the same movements. Thus the mind in us does not move external limbs immediately, but merely directs spirits flowing from the heart through the brain to the muscles and determines certain movements to them, for these spirits can be put to different movements with equal ease. And very many movements in us do not depend on the mind at all. Such are the pulse of the heart, digestion, nutrition, breathing when asleep, and walking, singing and such things even when awake. (Descartes, *Meditationes de prima philosophia* IV resp., AT VII, 229–30)

c. Correspondingly, the machine of the body is put together so that it is enough that the soul, or any other possible cause, moves that gland [the pineal gland] in different ways. It pushes the surrounding spirits to the brain's pores, which lead them through the nerves to the muscles. In this way the soul makes them move the limbs. (Descartes, *Les Passions de l'âme* 34, AT XI, 355)

d. And all activity of the soul consists in this: simply through willing something the soul makes the little gland to which it is closely joined move in the way needed for producing the effect which the volition is about. (Descartes, *Les Passions de l'âme* 41, AT XI, 360)

As is well known, Thomas Hobbes was a materialist who sought to explain all human psychology in terms of matter in motion (**a**). The cognitive explanations of action, therefore, also took the form of inner motions being developed into external ones. Considering the body as a machine was not new (cf. Aristotle, *De motu animalium*, 7; for the early modern context, see Leijenhorst 2002). Some early modern philosophies introduced the question of whether a soul is needed for voluntary control of action. Descartes thought that the human body is, to a large extent, capable of acting alone (**b**), and that the will plays only a small role in the system (**c** and **d**). Descartes spells out his theory of the mechanisms of the body in his treatises *Of Man* and in *Description of the Human Body*. (Cf. Rozemond 1998.)

2 Free Will as a Power

a. Freedom of the will is a great gift of God, who makes us his sons rather than his slaves. It hands over to us the task of fashioning ourselves as we wish, with his favour and mercy; for there would be nothing to separate us from the beasts in the excellence of virtue if the same kind of naturally necessary and inevitable power acted in us as in the brutes. (Juan Luis Vives, *De anima et de vita* XI (*Opera omnia* VIII, 385))

b. Thus punishment and reward are not imposed upon humans just because of subsequent actions (that is, so that they would be enticed to or drawn from them), but also precisely because of the good or bad which is done in them as such. And for this same reason, humans are counted worthy of praise and honour for their actions, which could not be understood without freedom. (Suarez, *Disputationes metaphysicae* XIX.2.16)

c. In a way the greatest perfection in humans is that they act by their will – that is, freely – and are thus in a special way the author of their own actions, and deserve praise for them. Automaton are not praised for performing accurately all those movements for which they are built, because they perform them by necessity. (Descartes, *Principia philosophiae* I.37, AT VIII, 18–19)

d. Deliberation therefore requireth in the action deliberated two conditions: one, that it be future; the other, that there be hope of doing it, or possibility of not doing it. For appetite and fear are expectations of the future; and there is no expectation of good without hope; nor of evil without possibility. Of necessities therefore there is no deliberation. In deliberation the last appetite, as also the last fear, is called WILL (viz.) the last appetite will to do; the last fear will not to do, or will to omit. It is all one therefore to say will and last will: for though a man express his present inclination and appetite concerning the disposing of his goods, by word or writing; yet shall it not be accounted his will, because he hath liberty still to dispose of them otherwise; but when death taketh away that liberty, then it is his will. (Hobbes, *Elements of Law* I.12.2)

e. And thus these commands of the mind originate in the mind by the same necessity as ideas of actually existing things. Therefore, those who believe that they speak or stay quiet, or do anything under the free command of the mind, dream with open eyes. (Spinoza, *Ethica* III, prop. 2 schol.)

f. Appetite, fear, hope, and the rest of the passions are not called voluntary; for they proceed not from, but are the will; and the will is not voluntary. For a man can no more say he will will, than he will will will, and so make an infinite repetition of the word will; which is absurd, and insignificant. (Hobbes, *Elements of Law* I.12.5)

g. Liberty belongs not to the will. If this be so, (as I imagine it is,) I leave it to be considered, whether it may not help to put an end to that long agitated, and, I think, unreasonable, because unintelligible question, viz. Whether man's will be free or no? For if I mistake not, it follows from what I have said, that the question itself is altogether improper; and it is as insignificant to ask whether man's will be free, as to ask whether his sleep be swift, or his virtue square: liberty being as little applicable to the will, as swiftness of motion is to sleep, or squareness to virtue. Every one would laugh at the absurdity of such a question as either of these: because it is obvious that the modifications of motion belong not to sleep, nor the difference of figure to virtue; and when one well considers it, I think he will as plainly perceive that liberty, which is but a power, belongs only to agents, and cannot be an attribute or modification of the will, which is also but a power. (Locke, *An Essay Concerning Human Understanding* II.21.14)

Many Renaissance authors, though clearly not all (cf., e.g., Michel de Montaigne, *An Apology for Raymond Sebond*) emphasise the will as the central human distinction, the foundation of human dignity (a). This picture can be found in late scholastics like Suarez (b). The most important early modern philosophers were divided on this issue. Some, like Descartes, saw the will as the morally crucial feature that differentiates humans from other animals and everything inanimate (c). Some played down the role of the will. Hobbes simply calls the will the last appetite in a deliberative process. Since action directly follows the last appetite, the will is effectual (d). Spinoza's view is closely similar in this respect: he argues that freedom is illusory daydreaming (e). While some scholastics had described the will as a reflexive self-mover, Hobbes denies the possibility of second-order willing, claiming that such structures would lead to infinite regress (f). The same view is also taken up by later philosophers, e.g. John Locke (*Essay* II.21.25). Another simplifying move in Locke was to point out that one should not claim that the will is free, when grammatically freedom belongs to agents, and practically no early modern philosopher took the will to be an agent (g).

3 Indifference and Spontaneity in Action

a. But the will, or whatever this power would be that is not determined by anything else, could go indifferently into opposite acts. (Pomponazzi, *De fato* III, 1)

b. Nevertheless this is a great mistake of Pomponatius [i.e., Pomponazzi] and many others, to think that that liberty of will, which is the foundation of praise or dispraise, must consist in a man's having perfect indifferency, after all motives and reasons of action propounded, and after the last practical judgement too, to do this or that, to choose the better or the worser [sic.], and to determine himself fortuitously either way; for the contingency of freewill doth not consist in such a blind indifferency as this is after the last judgement and all motives of action considered, but it is antecedent thereunto, in a man's intending or exerting himself more or less, both in consideration and in resolution, to resist the inferior appetites and inclinations urging to the worser. (Ralph Cudworth, *A Treatise of Freewill* (72))

c. For no one has ever doubted, or been able to doubt, that people act spontaneously in many of their actions and move themselves and apply themselves to considered acts through their own wills. But what has become controversial is whether necessity and determination are united as one option in this 'voluntariness'. (Suárez, *Disputationes metaphysicae* XIX.2.9)

d. If this judgement of reason is required for acting as is a kind of necessary cause of a free act of the will, and the will is not able to deny consent to this judgement once the judgement has been made, then the will is not a power able to will and able not to will, once the necessary requirements the act have been posited. Therefore, it is not a free power. (Suárez, *Disputationes metaphysicae* XIX.6.2)

e. ‘Freedom of choice’ is, however, a stricter concept than ‘voluntary’ or ‘spontaneous’, as it contains a further requirement, namely ‘power of acting or not acting’. ‘Spontaneous’ is defined simply as ‘that whose principle is in one who cognises the specifics concerning the action’. Thus that which we do by ignorance – since we are not the causes of such things – and that which we do through violence, compelled, are both said to be *akousion* or involuntary (*invitus*). However, those spontaneous acts which are free in such a way that we could wish and act otherwise, those come properly from free choice, which presupposes our preceding free election. (Henry More, *Enchiridion ethicum* (*Opera Omnia* III.1.9–10))

f. For the will consists merely in our ability to do or not do something (that is, to affirm or to deny; to pursue or to avoid), or rather merely in how, when the intellect puts forward something to be granted or denied or to be pursued or avoided, we move forward without perceiving any external power determining us to do what we do. [...] The indifference that I experience when no reason pushes me in one way rather than the other is the lowest grade of freedom. It is not evidence for perfection, but rather for deficient thinking. For if I ever see clearly what is true and good, I never deliberate what should be judged or chosen, and thus I cannot remain indifferent, although I clearly am free. (Descartes, *Meditationes de prima philosophia* IV, AT VII, 57–58)

g. But perhaps some people understand by ‘indifference’ a positive faculty to direct oneself to either of two contraries – that is to pursue or to flee, to affirm or to deny. I have not denied that there is such a positive faculty in the will. Rather, I would deem that it is there not only with respect to those acts in which one is not pushed by any evident reason on the one side or the other, but even with respect to all other acts. Thus even when some very evident reason moves us to one side so that practically speaking we hardly could turn to the other, absolutely speaking we could. It is always possible for us to withdraw from pursuing a clearly conceived good, or from admitting an evident truth, if we just think that it is good to demonstrate our free will this way. (Descartes to Mesland, February 9th, 1645, AT IV, 173)

h. We have shown that the kind of freedom required at the theological schools consists in *understanding*, which contains a distinct knowledge of the object of deliberation; in *spontaneity*, with which we direct ourselves; and in *contingence*, which means exclusion of logical or metaphysical necessity. (Leibniz, *Théodicée* §288)

Pomponazzi’s definition of indifference in the will comes from medieval scholasticism (a). The basic idea is that a person or the will is indifferent between an action and its opposite if it can go the other way than it actually goes: it is sometimes claimed that the will is a two-way power. For early

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modern philosophers, it was not always clear whether such indifference is required for freedom. For Augustine, for example, freedom often meant having the power to do good regardless of whether the power to do bad is also present. This position is taken by, e.g., Cudworth (**b**), and assumes ‘spontaneity’ in action, which was understood to be a more basic requirement for freedom. Such spontaneity of human action was accepted even by many philosophers who would not have accepted that acting otherwise would be possible at the time of the free action (e.g. Hobbes, Spinoza). If the action is caused by the voluntary agent, it is generally spontaneous even if there are further causes necessitating the action. Thus, if freedom requires only spontaneity, but not indifference, there is no incompatibility between determinism and freedom. According to Suárez, the debate about freedom is not about spontaneity but about indifference (**c**). He takes the Scotist position according to which it is not reason that determines the will, but rather, the will is a free ‘two-way’ power (**d**). Some authors, like Henry More, required indifference for genuine freedom (**e**). Descartes seems to agree (cf., e.g., *Les Passions de l’âme* 41, AT XI, 360: ‘the will is so free by nature that it can never be constrained’), but he is not always clear about his position. He accepts that in the case of an obvious good or truth, a clear and distinct perception has some kind of compulsive force (**f**). In his letter to Mesland, he explains that we can always step back and stop considering the evident truth, and thus withdraw from accepting it (**g**; cf. also *Meditations*, 6th replies; AT VII, 432–433. For discussion see, e.g., Alanen 2003). The idea can be found earlier, e.g. Aquinas (*Summa theologiae* II–1.10. 2c) and later, e.g. Malebranche (see **4b** below) and Locke (*Essay* II. 21.48). Leibniz gives a clear list of three requirements for freedom, but it is not always as clear how his view relates to the condition of indifference (**h**).

4 Will as a Power for the Good

a. Thus by the word ‘will’ I wish to mean here the impression or the natural movement which brings us towards the indeterminate and general good, and by ‘freedom’ I mean only the power which the mind has to turn this impression towards objects that please us, and to bring about that our natural inclinations are directed at some particular object ... Thus, although our natural inclinations are voluntary, they are nevertheless not free with the mentioned freedom of indifference, which includes the power to will or not to will, or rather to will the contrary of that which our natural inclinations take us ... because it is not in the power of our will not to wish to be happy. (Malebranche, *De la recherche de la vérité* I.2)

b. When two good things are presented to your mind at the same time and one seems better than the other, then if, at that moment, you choose to determine for yourself, you will necessarily love that which seems better to you, supposing that you have not seen any other alternative and that you absolutely want to choose. But you can always suspend your consent concerning false goods or abandon them, and you can always examine and suspend the judgement which must direct your choice. (Malebranche, *Méditations chrétiennes et métaphysiques* VI.19)

c. As for me, I do not in any way require the will to always follow the judgement of the understanding, since I distinguish this judgement from the motives coming from insensible perceptions and inclinations. (Leibniz, *Essais de Théodicée, Appendices*, ed. Gerhardt (vol. VI, 413))

d. No one can desire to be happy, to act well and to live well, without simultaneously desiring to be, to act and to live, that is, to actually exist. Proof. The proof of this proposition, or rather the fact itself, is clear in itself and also from the definition of 'desire'. For (by III, def. affect) the desire to live and act happily or well, etc., is human nature, or (by III, prop. 7) the 'striving' by which each person strives to conserve his being. Thus, no one can desire, etc. q.e.d. (Spinoza, *Ethica* IV, prop. 21)

e. In order to shew the fallacy of all this philosophy, I shall endeavour to prove first, that reason alone can never be a motive to any action of the will; and secondly, that it can never oppose passion in the direction of will ... 'Tis not contrary to reason to prefer the destruction of the whole world to the scratching of my finger. (Hume, *Treatise* II, III.3)

Aquinas's theory that the universal good is the necessary object of the will was very well known and largely accepted in early modern philosophy (**a**). Even the stricter implication, that of two options the one estimated better will always be chosen, was sometimes accepted (**b**). Leibniz put forward an interesting reservation related to his theory of insensible perceptions (**c**). Further, a rising tendency in the early modern era was to interpret the ultimate good sought for as individualistic striving for self-preservation and self-love. Even Spinoza exemplifies this approach (**d**). Hume takes a position whereby reason is not the principle that guides people for the good (**e**).

5 Passions and Inner Conflicts

a. The principal effect of all passions in humans is that they incite and dispose the soul to want the things for which they prepare the body. Thus, the feeling of fear incites it to want to flee, and that of courage to want to fight, and so on for the others. (Descartes, *Les Passions de l'âme* 40, AT XI, 359)

b. You reject my claim, ‘it is enough to judge well to act well’. However, it seems to me that it is an ordinary school doctrine that the will is not turned to evil, except insofar as it is represented to the understanding as good in some respect, from which comes the saying ‘*every sinner is ignorant*’. Thus, if the understanding never represented anything that is not good to the will as good, it could not go wrong in its choice. But it often does represent different things at the same time, from which comes the saying, ‘*I see and approve better*’, which applies only to the weak spirits. (Descartes to Mersenne 27.4.1637(?), AT I, 366)

c. That which his Lordship allegeth against this, is first, out of a poet, who in the person of Medea says, ‘*I see and approve better, yet follow the worse.*’ But that saying, as pretty as it is, is not true; for though Medea saw many reasons to forbear killing her children, yet the last dictate of her judgment was, that the present revenge on her husband outweighed them all, and thereupon the wicked action necessarily followed. (Hobbes, *Of Liberty and Necessity*, in *English Works* (IV, 269))

d. Nevertheless, nothing would keep them from believing that all our actions are free, if we had not experienced doing many things we regret afterwards, and often being put into conflict by contrary affects we see better and yet follow the worse. Thus an infant believes he desires milk freely, the angry boy that he freely wants revenge, and the timid one to flee. Furthermore, the drunkard believes that he speaks through a free command of the mind about things that he later, when sober, would prefer not to have said. [...] Thus even experience teaches as clearly as reason that people believe themselves to be free only because they are conscious of their actions but ignorant of the causes determining them, and that the commands of the mind are nothing but the affects themselves, which thus vary with the variety of bodily states. (Spinoza, *Ethica* III, prop. 2, schol.)

e. I am forced to conclude that good, the greater good, though apprehended and acknowledged to be so, does not determine the will, until our desire, raised proportionably to it, makes us uneasy in the want of it. Convince a man never so much, that plenty has its advantages over poverty; make him see and own, that the handsome conveniences of life are better than nasty penury: yet, as long as he is content with the latter, and finds no uneasiness in it, he moves not; his will never is determined to any action that shall bring him out of it. Let a man be ever so well persuaded of the advantages of virtue, that it is as necessary to a man who has any great aims in this world, or hopes in the next, as food to life: yet, till he hungers or thirsts after righteousness, till he feels an uneasiness in the want of it, his will will not be determined to any action in pursuit of this confessed greater good; but any other uneasiness he feels in himself shall take place, and carry his will to other actions ... And thus he is, from time to time, in the state of that unhappy complainer, *I see and approve better, yet follow the worse*: which sentence, allowed for true, and made good by constant experience, may in this, and possibly no other way, be easily made intelligible. (Locke, *An Essay Concerning Human Understanding* II.21.35)

f. What we call strength of mind, implies the prevalence of the calm passions above the violent. (Hume, *A Treatise of Human Nature* II, III.3.)

It is not only free rational choice that guides human action, but also passions. The emotions and reason can thus be in a conflict, though many authors wanted to explain inner conflicts as between different emotions. In the Cartesian model, passions prepare the body to act in a certain way and ‘incite and dispose’ the soul to that kind of action (**a**; see above pp. 508–510). An important dimension of Descartes’s project in his *Passions* is to show how to develop control of emotions, making it easier to act in a rationally controlled way rather than in an immediately emotional way. Medea’s case, as described by Ovid, was referred to by many early modern authors, often as the paradigm case of weak will (**b**). Hobbes did not accept the possibility of two simultaneous willings, and thus claims that even Medea’s case ought not to be described so (**c**). Spinoza also seems to think that Medea should rather be seen as having contrary affects (**d**), whereas Locke is closer to understanding the conflict as between effective emotions and inefficient reason (**e**). Since Hume does not accept that reason alone motivates action, he follows Hobbes in understanding the conflict as between passions, but unlike Hobbes, Hume seems to accept simultaneous opposing passions (**f**).

Part XII
Mental Disturbances

Chapter 35

Ancient Theories

Marke Ahonen

In ancient medicine, mental and physical disorders were rarely systematically distinguished, as both were believed to be due to similar physical causes (e.g. disturbances in the humoural balance of the body). However, the medical authors described a number of illnesses characterised by the presence of mental symptoms, such as hallucinations, delusions, or irrational and inappropriate emotional states and responses. These comprised, most notably, mania and melancholy, often clustered together under such terms as ‘madness’ or ‘derangement’. Mania and melancholy were described as involving a loss or disturbance of reason, and as human reason was understood in a rather normative fashion, diagnosing madness in a patient was believed to be a fairly uncomplicated procedure. As a rule, medical authors interpreted mental symptoms as indications of disturbances in the physical apparatus of cognition and emotional regulation. Thus, for example, the famous Hippocratic tractate *Sacred Disease* explains mental symptoms such as hallucinations and bizarre fears and worries as resulting from a disordered state of the brain (1). According to the treatise, the brain regulates all thought, sense perception and emotional activity, and distortions of these functions are invariably due to humoural or elemental imbalances of the brain. Not all ancient medical authors subscribed to this view: both the brain-centred model and the humoural pathology had their critics. Still, many authors ascribed the various symptoms of mania (comprising delusions and excessive emotions of both ‘manic’ and ‘depressive’ type) to a disordered state of the head, while the symptoms of melancholy (comprising depression, fears/phobias, and aggressive or suicidal behaviour) were believed to originate either with the head or with the upper digestive tract. Mental disorders were usually treated by measures believed to address the physical cause of the illness. These comprised

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drugs (e.g. the purgative hellebore), bloodletting, and dietary prescriptions concerning the food, drink, physical exercise etc. of the patient. However, sometimes the mental symptoms were addressed directly by means of ‘psychotherapy’: the patient’s delusional ideas were corrected (sometimes even punished), and his mind was exercised with questions, games, and various distractions. Despite the diversity of ancient medical theories and schools, the discussion of mental illness was in many respects rather homogenous, and this is reflected in the philosophers’ comments on the issue.

The *Sacred Disease* was probably written around the time of Plato’s birth. In *Timaeus*, Plato puts forth an explanation for epilepsy that resembles the one given in the Hippocratic tractate. Plato recognises mania as a medical illness (*nosos*), but he makes use of the ‘madness’ vocabulary also in non-medical senses to denote states of foolishness and moral deficiency, often dubbed ‘diseases of the soul’ (1). In ancient philosophy, this phrase was used of passions and other permanent or recurrent moral flaws and errors; usually, it did not refer to actual medical disorders. For Plato, medical mental disorders apparently absolve the person of moral responsibility for acts performed because of the disorder, whereas ‘madness’ of the moral kind does not.

Aristotle too recognises mania as a medical illness (*nosos*). Evidently, this is a rather general notion, characterised primarily by deficient functioning of the rational soul. Hence, mental patients are, in the corpus, compared to children, barbarians, non-human animals, or drunken or sleeping persons. Physiologically, mania seems to be due to an abnormal amount of heat and movement around the heart, where the soul resides. However, Aristotle notes that the intellect itself, being impassible, is never affected in states of disease, only hindered from functioning. Aristotle also discusses the condition of those having a congenital melancholic temperament. In *Problems*, black bile is described as being of an exceptionally heat-sensitive nature. This predisposes the melancholic to manic and depressive moods, but when the heat remains moderate, their mind may function exceptionally well, providing the famous link between madness and genius (2).

The Stoics evidently approved of the current medical notion of mental illness, noting that even their infallible sage could be afflicted with this kind of madness, as he was not physically indestructible. However, the Stoics insisted that medical mental illness was to be distinguished from their notion of ‘madness’ as a moral affliction, to which the sage alone was, by definition, immune. There was, apparently, some debate about how mental illness would affect the sage. Supposing that mental illness typically causes false impressions, would the sage assent to these, and would he lose his virtue during the bout of illness? Answers to these questions seem to have varied (3).

For the Epicurean Lucretius, the occurrence of mental symptoms and mental disorders demonstrated the frail (and consequently mortal) nature of the human soul, especially the rational soul (3). As a bundle of atoms, the human mind is susceptible to various distortions as to the amount, quality and configuration of the atoms composing it, and Lucretius explains that it is these distortions that the medical measures taken in cases of mental illness correct. Hence, the success of the

physical treatment of mental illness can be taken as a further proof of the physical nature of the human mind. Despite this robust physicalism, the Epicureans did not endorse any physical (dietary or other) therapy to cure the false beliefs and emotional dispositions they regarded as responsible for the general lack of happiness and peace of mind in mankind.

For the Pyrrhonian Sceptics, delusions and hallucinations experienced by the mentally ill served as a piece of evidence for their claim that there are infinitely various ways in which living beings experience reality. If our individually varying physiological constitution determines our perception of reality, there is no way of knowing reality beyond this constitution; furthermore, it is ‘artificial’ to claim that the experience of those conventionally dubbed as ‘healthy’ is more correct than of those dubbed ‘sick’, as we possess no means of comparing either experience with reality itself (3).

Galen, the accomplished physician, medical author and Platonic philosopher, regarded mental illnesses as disorders of the brain-nerve system that was responsible for perception, reasoning, cognition and voluntary movement. More specifically, they were humoural/elemental imbalances of the brain affecting the psychic *pneuma*, dubbed by Galen as ‘the first instrument of the soul’. The philosophical notion of the rational soul prompted Galen to form a medical category akin to the modern notion of mental disorder: in the work *De symptomatum causis*, Galen distinguishes the disturbances of the ‘rational functions’ (*hēgemonikai energeiai*) as a medical category of their own. As medical mental illnesses affected the functions of the soul and not the soul itself, they were distinct from actual ‘diseases of the soul’, i.e. passions and intellectual errors, which Galen discussed in his moral philosophy. As to the question of soul’s passibility and mortality, Galen remained on the fence, regarding, however, mental illnesses as evidence of the soul’s frail nature and subservient relation to the body (4). Galen’s medical doctrine of mental illness was extremely influential in medieval Arabic and Latin discussions, as well as in Renaissance medicine.

On ancient philosophers’ views on mental illness, see Ahonen 2013 and Pigeaud 1981. On ancient medical views, see Pigeaud 1987 (on mania), and Flashar 1996 and Pormann 2008 (on melancholy).

1 Plato and the Hippocratic View

a. Through this [i.e. the brain], in particular, we think and reason and see and hear and distinguish the ugly and the beautiful, the bad and the good, the pleasant and the unpleasant ... Through this same [organ] we also go mad and become deranged, and are troubled by horrors and fears – sometimes by night, but sometimes also during the day – and by dreams and annoying mistakes and inappropriate worries and experiences of ignorance and strangeness. And all this we suffer because of the brain, when it is not healthy but hotter or colder or moister or drier than is natural ... And we go mad because of the moistness; for when the brain is

moister than is natural, it necessarily moves, and when it moves neither sight nor hearing can remain still, but we see and hear now one thing and now another, and the tongue speaks of whatever we happen to see and hear. (Anonymous, *The Sacred Disease* 14)

b. When [white phlegm] is mixed with black bile and spreads into the circles in the head, which are most divine, disturbing them, it is milder when it comes during sleep, but more difficult to get rid of when it attacks those who are awake. As it is an ailment of a sacred nature, it is most justly called ‘sacred disease’. (Plato, *Timaeus* 85 a–b)

c. If a person is deranged, he must not appear publicly in the city; the relatives of madmen must guard them at home in whichever way they are able or otherwise pay a penalty ... People are mad in many different ways. Those we spoke of just now are mad because of illnesses, but there are those who are mad because of bad nature and nurture of their spirit. (Plato, *Laws* XI, 934c–d)

In antiquity, there were several theories as to why epilepsy was dubbed the ‘sacred’ disease; cf. Caelius Aurelianus, *On Chronic Diseases* I.60. Plato explains that the name is due to the fact that the illness affects the divine part of the man, the rational soul and its circles that rotate in the head, in imitation of the world soul (**b**). The ascription of the illness to the head (and implicitly to the brain) and the presence of phlegm there brings to mind the explanation given for epilepsy in the Hippocratic *Sacred Disease*, the model for most later discussions of mental disturbances in ancient medicine. At *Timaeus* 44b Plato attributes the human infant’s intellectual inferiority to the disturbing effects of growth and movement upon the circles of the rational soul; this too accords with the explanation of madness offered in *Sacred Disease* (**a**). No explanation is given in *Timaeus* as to how the physical environment of the body can affect the allegedly immaterial circles of the soul. The remark on epilepsy comes in the section towards the end of the dialogue discussing diseases of the body. ‘Diseases of the soul’, on the other hand, discussed at *Timaeus* 86b–87b, are moral flaws rather than medical disorders, even though they too ultimately depend upon the condition of the body. On the diseases of the soul in *Timaeus*, see Gill 2000.

In *Laws*, Plato takes for granted the presence of mentally disturbed people even in a well-governed city-state, and a number of special regulations are made for them (**c**). Most importantly, mental illness reduces the liability of a person accused of a criminal offence (864d). In this Plato seems to be following the customary practice of his day, but for his own reasons: punishments in *Laws* serve mostly educative purposes, and there would be no point in educating persons whose criminal behaviour is not due to any moral deficiency but to a (physical) illness (*nosos*). It is the responsibility of the family to keep the

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mental patient from causing any damage (this was apparently the normal practise in the Graeco-Roman world, as the mental patients were cared for at home; there were no public hospitals), and the patient enjoys a status akin to that of a child within the family (cf. 929e). Plato makes the distinction between medical mental illness and moral depravity that manifests itself as 'madness' (i.e. irrational action). However, he does not emphasise the difference, as even moral flaws often derive from factors beyond the immediate control of the subject.

2 Aristotle and the Aristotelian Tradition

a. For [the intellect] would most likely be destroyed by the feebleness of old age, but actually the same happens as with the sense organs: for if an old man were to get an eye of a certain kind, he would see like a young man sees. Thus, old age is not about something happening to the soul, but to that in which the soul is, as also happens in states of drunkenness and in illnesses. The power of thought and speculation is dimmed because something else is destroyed inside, but in itself it is impassible. (Aristotle, *De anima* I.4, 408b19–25)

b. Because they [impressions of *phantasia*] are persistent and similar to sense-perceptions, animals often act in accordance with them, some because they do not possess intellect, e.g. beasts, and some because the mind is temporarily clouded by *pathos*, or illnesses, or sleep, e.g. men. (Aristotle, *De anima* III.4, 429a4–8)

c. For example, those in whom [the natural melancholic disposition] is abundant and cold are slow and stupid, whereas those in whom it is very abundant and hot are manic and gifted and erotically inclined and easily provoked to manifestations of spirit and desire, and some are also rather talkative. Many are also afflicted with manic and enthusiastic diseases because this heat is near to the seat of intellect ... Those in whom the excessive heat has decreased to a moderate level are, though being melancholic, more intelligent and less eccentric and in many respects superior to other people, some in education, some in various skills, some in statesmanship. (Pseudo-Aristotle, *Problems* 30.1, 954a30–954b4)

d. All excessive folly or cowardice or dissoluteness or brutality is a sign of either animality or sickness ... Of foolish persons, those who are irrational by nature and live by sensation only are animal-like (for example, some of the remote barbarian tribes), but those who are foolish because of illnesses, such as epilepsy or mania, are sick. (Aristotle, *Nicomachean Ethics* VII.5, 1149a5–12)

Aristotle recognises that some physical illnesses (*nosoi*) affect the powers of the soul (**a**); mania is evidently one of these. Although these illnesses appear to be impairments of reason, Aristotle claims that the intellect itself remains impassible and its actions are merely ‘dimmed’ in the unfavourable bodily environment. As to senile dementia, its cause is evidently the general chilling of the aging body, whereas in drunkenness and mania it seems to be the heat and the heat-generated movement that disturb the functions of the rational soul. Cf. (c), where ‘manic’ diseases are ascribed to the presence of extra heat near the ‘seat of intellect’, i.e. the heart; see also *Problems* 30.4, 957a1–5; and *De partibus animalium* III.10, 672b28–30.

The notion of the impassible intellect gives rise to the question, what powers of the soul are responsible for the actions of madmen in the absence of reason? Aristotle refers to *phantasia*, which also guides dreamers and non-human animals (**b**): madmen perhaps move in a maze of incoherent and strange images similar to those of dreamers, and, being incapable of rational consideration, are inclined to follow any image popping to their head, especially those promising satisfaction of some animal-like hedonic or aggressive desire. For some examples of the behaviour of madmen, cf. *Nicomachean Ethics* VII.5, 1148b25–27, *Eudemian Ethics* III.1, 1229a17–18, and Pseudo-Aristotle, *De mirabilibus auscultationibus* 31, 832b20–21.

The author of the famous Aristotelian account of melancholic temperament (**c**) included in the *Problems* 30 remains uncertain, Theophrastus being the traditional candidate (cf. Diogenes Laertius V.44 and IX.6). The notion of melancholic temperament in this account is somewhat different from the rest of the corpus. Elsewhere, the melancholic are presented as inconsiderate and hedonic (cf. *Nicomachean Ethics* VII.10, 1152a19; VII.14, 1154b11–14). The possibility of their possessing some prophetic talent is toyed with (*Eudemian Ethics* VII.14, 1248a39–40, *De divinatione per somnium* 2, 463b17–22), but even this ability is actually related to their rash, irrational and intellectually passive nature. *Problems* 30.1 claims that the character of those having a natural (i.e. not acquired through food) melancholic temperament is heavily influenced by this property. Black bile is heat-sensitive and changes its temperature readily according to the changes in the bodily environment. Cold black bile makes people slow and stupid, hot black bile makes them manic and susceptible to actual derangement, but black bile at a moderate temperature may render a person exceptionally talented in various arts (e.g. philosophy, poetry, statesmanship). The discussion fuses the general desirability of moderation with the idea that extra-sensitivity is related to intelligence and talent. Even the talented melancholic remain emotionally precarious and an easy prey for many illnesses because of this sensitivity. For a more detailed analysis of the Aristotelian notion of the melancholic temperament, see van der Eijk 1990.

Aristotle also discusses cases of congenital mental abnormalities (**d**), contrasting *physis* with *nosos*. There are ‘animal-like’ individuals (e.g. the cruel

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tyrant Phalaris) and nations (remote barbarians), who exhibit character traits that in normal persons would be considered signs of mental illness, such as excessive brutality and irrationality. Aristotle notes that animal desires and dispositions are sometimes controllable, but even then discussion of vice, virtue and continence is not applicable to such behaviour in the strict sense of the words. In general, animal-like and mentally ill individuals seem to be beyond morality.

3 Hellenistic Philosophy Schools

a. From where the Greeks got the word *mania* I cannot easily say; we, however, distinguish this very concept better than they do, for we separate madness (*insania*), which is a wider term and closely akin to stupidity, from frenzy (*furor*). The Greeks, too, wish to do this, but cannot with their vocabulary; they call *melankholia* that which we call ‘frenzy’, as if the mind could be disturbed only by black bile, and not also (as often happens) by grave anger or fear or sorrow. It is the latter madness which we attribute to Athamas, Alcmaeon, Ajax and Orestes ... Though this (=frenzy) appears to be worse than madness, the fact is, however, that frenzy can afflict a sage whereas madness cannot. (Cicero, *Tusculan disputations* III.11)

b. Chrysippus says that virtue can be lost, while Cleanthes says that it cannot be lost. Chrysippus says that it can be lost as a consequence of drunkenness or melancholy, whereas Cleanthes says that firm apprehensions prevent its being lost. (Diogenes Laertius, *Lives of Philosophers* VII.127)

c. And when we observe that the mind can be healed like the sick body and flexed by the medical art, this too foretells that the mind leads a mortal life. For it is necessary to add parts or transpose them or even detract a bit from the total, when someone attempts and undertakes to change the mind, or tries to flex any other nature. But that which is immortal does not allow its parts to be transferred, or anything to be added, or any one bit to be detracted. For when something is changed and transgresses its own boundaries, this is at once the death of what was before. Therefore, if the mind becomes diseased, it gives signs of mortality, as I taught, or if it can be flexed by the medical art. (Lucretius, *De rerum natura* III, 510–522)

d. If somebody says that a combination of certain humours causes inappropriate representations of the underlying objects in persons who are in an unnatural state, we must say that because the healthy also have a mixture of humours, these (humours) have the power to make the external objects (which by nature are such as appear to those said to be in an unnatural state) appear different for the healthy. For it would be artificial to attribute the power to change the objects to those humours but not to

these humours, for just as the healthy are in a state that is natural for the healthy, but unnatural for the sick, similarly the sick are in a state that is unnatural for the healthy, but natural to the sick, so that we must believe that they too are, relatively speaking, in a natural state. (Sextus Empiricus, *Outlines of Pyrrhonism* I.102–103)

Cicero makes the distinction between medical mental illness and moral/intellectual deficiency (a). The distinction was crucial for the Stoics who famously claimed all mankind to suffer from ‘madness’ because of their moral and epistemic imperfection, thus using a medical term for a non-medical condition. For the same distinction, see Seneca, *Letter* 94, 17; *De beneficiis* II.35, 2; and the medical author Caelius Aurelianus, *On Chronic Diseases* I.144. Cicero uses the word *insania* for the madness of all mankind, noting its apt similarity to the word *insipientia* (stupidity), and *furor* for medical mental illness; he claims that the Greek equivalent for the latter, *melankholia*, is misleading, since mental illness is not always caused by black bile. Cicero refers to intense emotions as possible causes of mental illness, in this way following the common opinion of ancient doctors. Mental illness is ‘worse’ than common madness because it is ‘blindness in all things’, rendering the person beyond all rational communication – but it is not vice. Thus, it is a morally neutral condition.

No Stoic author claimed the sage to be immune to mental illness, as mental illness could be due to factors independent of the individual’s moral qualities, even though the sage was sometimes supposed to be of superior physical health (cf. Stobaeus, II.7.11m, 37–40 and Diogenes Laertius VII.90). The effects of mental illness on the sage, however, were debated (b). The debate was apparently similar to the discussion about the effects of wine on the sage: How would the sage behave under the influence of alcohol? Cf. Diogenes Laertius VII.118; Stobaeus II.7.11m, 41–45; Seneca, *Letter* 83. Chrysippus probably suggested that mental illness could reduce the sage (or any person) to a state beyond morality; cf. Simplicius, commentary on *Categories*, p. 402, 22–26. Cleanthes possibly ascribed the impossibility of losing virtue to a special (physical) firmness in the sage’s soul. Cf. Epictetus, *Dissertationes* III.2.5; I.18.23; II.17.33. In support of their doctrine of *katalêpsis*, the Stoics suggested that even non-sage persons are often able to tell hallucinations and real perceptions apart; cf. Sextus Empiricus, *Adversus mathematicos* VII.247.

The Epicurean Lucretius refers to the medical cure of mental illness by physical measures (c). The fact that the mind can become ‘diseased’ (cf. *De rerum natura* III, 459–475, where both excessive emotions and physical illnesses affecting the mind are mentioned) indicates its passible, fragile, and hence *mortal* nature. This is also supported by the fact that doctors heal the mind with physical means, for they must either add, detract or transpose soul atoms to effect such a

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change. Epilepsy and drunkenness are Lucretius' other examples of physical substances' influence upon the soul atoms (*De rerum natura* III, 476–505). In the Epicurean interpretation, mental illness is a 'disease of the soul', as it concerns the soul itself (i.e. the soul atoms) and not merely its physical environment. However, the Epicureans, too, spoke of unwanted emotions and false beliefs as 'diseases' of the soul, but did not suggest physical cures for these.

The Sceptics sought to point out how differently things can be experienced by different individuals. Mental illness, that could allegedly effect a drastic change in one's perception of reality (think of Ajax seeing the sheep as Greek commanders, or of Agave seeing his son as a lion), came in handy for this. Sextus argues that there is no way of comparing the differing experience of the healthy and the sick with reality itself; moreover, if we accept the (Hippocratic/popular) theory of humoral balances and imbalances, how can we claim that one combination of these humours distorts the experience while another does not (**d**)? Sextus himself was an Empiricist physician, but to what extent Empiricism was committed to Pyrrhonian Scepticism is unclear; cf. *Outlines of Pyrrhonism* I.236–241. On Empiricism's emphasis on the individual experience of the patient (in contrast with the normative notion of health and illness in the 'dogmatic' schools of medicine), cf. Galen, *De experientia medica* 24–25.

4 Galen

a. In these [i.e. the functions of the rational soul], too, there are three primary classes of symptoms: one is a loss of function, another is damage [to a function], and the third is distortion [of a function] into another kind. Losses occur in cases of so-called idiocy and in cases of amnesia ... We have seen people forgetting completely both letters and skills, not remembering even their own name, as Thucydides says happened during the plague ... It is evident that both idiocy and amnesia are due to a chilling ... Moderate damages and cases of, as it were, 'numbness' of reason and memory are due to a shorter-term chilling, owing to some cold medicines admitted into the body or put upon the head, or to some cold humour gathered in the brain. All cases of derangement, which are discordant movements of the rational power, occur because of corrupt humours or an imbalance in the parts of the brain. Those occurring with fever are called frenzy, and those occurring without fever are called *mania*; sometimes they follow upon biting and hot humours, in particular the yellow bile, but often they are produced because of a hotter imbalance in the brain itself. Only the melancholic derangements have a coldish humour as their cause ... All [melancholic patients] are irrationally depressed and cannot, when asked, say why they are in pain, and many of them fear death and other things not worth fearing; but

there are also those who intently desire death. There is nothing wondrous in the fact that fear and depression and anticipation of death occur when black bile seizes the principle of the rational soul, for we see also in the case of things outside the body that nothing is as frightening to us as darkness. When darkness, as it were, flows upon the rational part of the soul, the person is bound to be in constant fear, carrying as he is the reason of his fear always along with his body. (Galen, *De symptomatum causis*, Kühn 7, 200–204)

b. The melancholic are always troubled by fears, but the quality of their unnatural impressions is not always the same. For one man believed to have become a vessel of clay, and stood consequently out of the way of those he met so as to not be crushed. And another man, upon seeing crowing roosters, and how they flapped their wings before emitting the crow, flapped his own arms against his sides and imitated the sound of the animals. Again, another man feared that Atlas, who supports the world, would grow tired and shake it off his shoulders, so that the world would be crushed and we perish along with it (Galen, *De locis affectis*, Kühn 8, 190).

c. As long as the aforesaid causes (= drugs and corrupt humours) are followed by amnesia or numbness of mind or lack of movement or sensation, one may say that the function in question is hindered from its natural powers; but when somebody believes to see something that is not there, or to hear things nobody uttered, or utters shameful or forbidden or completely mindless things, it is a sign not only of the soul losing its congenital powers but also of some opposite power entering in (Galen, *Quod animi mores corporis temperamenta sequantur*, Kühn 4, 787–788).

Galen's category of the 'disturbances of the functions of the rational soul' is somewhat broader than the modern notion of mental illness, as it comprises disorders such as epilepsy, today classified as neurological (**a**). Galen distinguishes between permanent or temporary inability to exert a function, and a distortion of a function ('derangement'). Under the category of derangement fall melancholy, mania and *phrenitis* (frenzy), the three commonly recognised disorders of the 'madness' type. All three are essentially brain disorders, although melancholy and *phrenitis* may be gastric/diaphragmatic disorders affecting the brain secondarily (cf. *De locis affectis*, Kühn 8, 189, 331). 'Inner darkness' is also given as the cause of melancholic fear in *De locis affectis* (Kühn 8, 191), but no specific explanation is put forth for the delusions typical of melancholy, such as those described in (**b**). Apparently, mental illnesses disturb the psychic *pneuma* residing in the brain, as this is the 'first instrument' of the rational soul; cf. *On the Doctrines of Hippocrates and Plato* VII.3. Like some other physicians, Galen distinguished between 'hallucinational' and 'delusional' kinds of madness, claiming mere hallucinations to be due to disorders of sense organs and sensory nerves (cf. *De locis affectis*, Kühn 8, 225); thus, they can also be experienced by lucid persons.

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Galen's examples of melancholic delusions are probably traditional rather than derived from his own clinical experience; similar, sometimes nearly identical, case examples feature in other ancient medical descriptions of the symptoms of melancholy and mania. Delusions indicate the disturbed condition of the mind, but some authors took deeper interest in the content of the delusional beliefs, as this could help the diagnosis; cf. Rufus of Ephesus, fr. 11 in Pormann 2008. As Galen greatly admired Rufus' writing on melancholy (now lost), he may have shared his view on the issue.

In *Quod animi mores corporis temperamenta sequantur* ('That the soul's habits follow the bodily mixtures'; an English translation of the work is included in Singer 1997) Galen seeks to establish the soul's strong dependence on the condition of the body: the elemental balances of the body, and of the brain in particular, determine the individual's moral and intellectual qualities, and these qualities may be enhanced by dietary modifications (rather than by the 'cognitive' therapy which Galen advocates elsewhere, viz. in the works *De propriorum animi cuiuslibet affectuum dignotione et curatione* and *De animi cuiuslibet peccatorum dignotione et curatione*, both translated in Singer 1997). The body not only hinders the soul's functions in diseases, but also affects healthy mental qualities and processes; moreover, the bodily condition may actually distort the soul's function in cases of (mental) illness (c). This echoes the discussion on 'derangement' in (a) and is perhaps intended as a response to Aristotle (2b) who claimed the intellect to be impassible. On Galen's psychology in general, see Donini 2008, and the articles in Manuli and Vegetti (1988).

Chapter 36

Medieval Theories

Vesa Hirvonen

The Greek and Islamic tradition of medicine was adopted in medieval Europe through compilations made in the eleventh century in the medical school of Salerno. Constantine the African (c. 1020–1087) translated several works from Arabic into Latin. Among these were translations of Hippocratic and Galenic texts as well as Islamic medical treatises. The most influential of these was the partial translation *Liber Pantegni* of the medical compendium of ‘Alī ibn al-‘Abbās al-Mağūsī (Haly Abbas), which was later expanded by other translators. Other influential translations by Constantine were *De melancholia*, a partial translation of a treatise on melancholy by a tenth-century doctor Ishāq ibn ‘Imrān, and *Viaticum peregrinantis*, a partial translation of the medical encyclopaedia by the physician Ibn al-Jazzār. *Canon medicinae*, the partial translation of the medical encyclopaedia of the Persian scientist and physician Avicenna, is attributed to Gerard of Cremona (1114–1187). The Greek-Islamic tradition was continued in the Middle Ages by such medical texts as the anonymous *Prose Salernitan Questions* (c. 1200).

Medieval thinkers supposed on the basis of Greek and Islamic medicine that the cause of a mental disorder is usually humoral imbalance, often due to too much black bile (melancholy) in the brain. Because of that, the function of the brain is disordered. As sensory impressions are disturbed, the intellect of a mentally disturbed person does not act in the normal way, and the will loses its freedom. The behaviour of these people was thought to become in many ways disturbed, even bestial. Standard symptom lists of Galenic origin were circulated throughout the Middle Ages. Various frights and bestial behaviour were often mentioned. Some writers remarked that the behaviour of the person (such as excessive abstinence) could harm the brain and lead to madness (1).

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Traditional terms used for mental disorders in the medieval philosophical texts included such as *amentia*, *dementia*, *epilepsia*, *fatuitas*, *furor*, *insania*, *lethargia*, *lunatia*, *mania*, *melancholia*, *phrenesis* and *stultitia*. Some of these, such as *amentia*, *dementia*, insanity, foolishness (*fatuitas*), and stupidity (*stultitia*) often referred to negative passive madness and an absence of reason. Such terms as frenzy, fury, lethargy, mania and melancholy often referred to active madness causing something harmful.

Medieval writers often discuss whether demons have something to do with madness. There are references to demonic visions in Biblical texts, and sometimes those considered mad said themselves that they had seen or heard a demon. Medieval philosophers joined the Greek tradition in explaining away demonic appearances by natural reasons in this context. Some of them gave detailed bodily explanations concerning the appearances of demons. It was, for example, suggested that melancholic fumes, when ascending to the brain, affected the quality of mental images. Therefore, the imaginative faculty leads melancholics consider some things they see black, and accordingly say they have seen demons. These people have a constant fear of demons, since they carry the cause of this fear with themselves. Because of biblical authority, however, Christian writers could not totally exclude the role of demons (2).

Medieval writers also discussed prophecy and other special capacities of mad persons. Several thinkers admitted that they may see various things, including future events, more clearly than healthy people, and that they may become extraordinarily strong and quick. Some of them remarked that madness leads human beings to special friendship with beasts. There were attempts to find natural explanations of these phenomena, such as the inward reclusion of the soul, and the retraction of the sensitive animal spirits to the interior capacities (3).

According to the medieval writers, mad persons are not able to use reason (*usus rationis*). Cognitive disturbances, in their turn, cause trouble in their will. Since mad persons do not have a free choice (*liberum arbitrium*), they are excused from sin. Because of their inability to use reason, the will of the mentally disordered person is incapable of performing its proper function, such as the control of sensory passions. Because of disorder in the will, it was considered questionable whether mentally disordered people could make legal contracts and receive sacraments. They were not considered able to contract a marriage, except during possible lucid intervals. Mad people could not give their consent, and for a marriage to be valid there had to be an agreement of *liberum arbitrium*. Neither were such legal actions as making a will or taking an oath considered possible for mad people. Baptism was a necessary sacrament for salvation, and some thinkers therefore took great pains to ponder whether mad persons could receive it, if they had not been baptized as children (4).

It is important to realize that according to medieval philosophers, mad persons have not lost any parts of their soul or their basic capabilities. If this were the case, they would not be considered human beings by definition. Instead, they were thought to have lost the use of some parts of soul and their functions.

1 Causes and Symptoms

a. The common signs of melancholy are fear and sadness with an evil intention. Some fear death, some desire it, some laugh a lot, some cry, some deny their existence, some think to be a clay vessel and are careful not to be crushed, some hope to be brute animals and crow like cocks, some foretell and think they foretell divine things. Each kind of melancholy has signs of its own. When it is caused by excessive black humours in the brain, its signs are mental alienation, anxiety, sadness, fear, hesitation, hallucination, suspicion and so on. (*Pantegni, Theorica IX.7 (Omnia opera Ysaac II, Lyon 1515, 42r)*)

b. And we say that when the black bile which causes melancholy is combined with blood, it is accompanied by joy and laughter, and not by extreme sadness. But if it is combined with phlegm, it is accompanied by sloth, paucity of heat, and quiet. And if it is combined with yellow bile, it is accompanied by agitation, lesion and a demonic effect, and it is similar to mania. And if there were pure black bile, then there would be much cogitation and less courage, unless the person is provoked, brawls and has hatred which he cannot forget. (*Avicenna, Liber Canonis III.I.4, ch. 20 (Venice 1507, 189r)*)

c. There are many kinds of apparitions like this. Some are shown to those suffering from *dyscrasia*, like to the frenetics whose disease, when it is born from an infection of some membranes of the brain because of the heat of yellow bile or because the boiling of the blood close to the heart, sends hot steam to the brain. Sometimes it is born from another disease, like from a disease of the diaphragm or stomach or womb or other members which suffer from mouldering. This is because of the connection of the nerves of those members with the brain. Therefore when released mouldering steam arises to the brain, it is somehow corrupted and there will be frenzy, which is followed by alienation of mind. Since the rational power rules in the brain in the sense that the inner sensory powers immediately serve it, it is then impeded from intellectual operations because of the multitude of movements made in the brain and because of the confusion of the animal spirits, and the power of imagination with its phantasms which are infected because of infection of the brain, in which the phantasms wander like forms in water or in mirror, does not admit the dominion of the superior virtues which judges the objects of the lower power according to the truth of the thing, as when it says that something is not a thing, but phantasms or species of things, and then the fantasy judges the phantasms. (*Witelo, De causa primaria (8–9, 335–352)*)

d. Therefore Galen says in his book *On passions*: it is no wonder if someone suffering from black bile suffers from sadness or suspicion of death, since outside the body nothing is more fearful than darkness. Therefore, when something dark, like melancholic fume, covers the brains, it is inevitable that the patients are afraid, since they carry with themselves the reason why they are afraid, and therefore they dream terrible and dark things, evil to sight, stinking to smell and acid to taste. From all

these a melancholic passion arises. Similarly it is also a sign of manic or melancholic disposition when people rejoice and laugh at sad things, and mourn and grieve for things which in reality are joyful. Also, such people tenaciously keep silent when they should speak, and insolently speak when they should be silent. Besides, some think to be a pot of clay and earth, and are afraid to be touched, so that they would not to be broken and crushed. And some think they close the world in their fist and hold everything in their hands, and therefore they will not extend their hands to food; they are afraid that if they extended their hands, the parts of the world would fall and perish. Likewise, some think that an angel holds the world and wants, because of weariness, to let the world fall, and therefore they raise their hands and shoulders hoping to sustain the collapsing world, and resist with forceful kicks when physicians force them to hold down their hands and shoulders. Similarly, it seems to some others that they do not have a head, or, if they think to have it, they think it to be leaden or of an ass or in another way monstrous. Besides, some others, when they hear cocks to crow, raise their arms and beat themselves, and, when crowing, believe to be cocks, and finally, because of crowing so much, become hoarse or mute. Also, some others fall irrevocably into deep suspicion, because of which they hate, blame and upset their friends – indeed, sometimes beat and kill them. Melancholics fall into these and many other astonishing passions, as Galen, Alexander [Trallianus], and many other authors report. (Bartholomaeus Anglicus, *De proprietatibus rerum*, IV.11 (101–102. 68–98))

e. ... since it [excess in asceticism] produces incurable diseases because of lesions of the brain and perturbations of the reason, such that through mania or fury or other melancholic passions the phantasms kept in the brain are intensified and intimately established to the extent that they are deemed to appear outside as real things, and people presume to hear or see or touch things which are not perceived by any exterior sense. Sometimes this passion strengthens until it becomes such an insanity that people think themselves to be something other than they are. There are examples of people who believe that they are cats, cocks, donkeys, or that they are dead. (Jean Gerson, *De distinctione verarum revelationum a falsis*, *Œuvres* III (44))

According to Constantine the African, each kind of melancholy has its symptoms, but the common signs are fear and sadness with an evil intention (a). Avicenna held black bile to be the central cause of melancholy and divided the disease into different kinds on the basis of the humours with which black bile was mixed (b). Witelo, whose psychopathological views were influenced by Constantine the African's translation of *Viaticum peregrinantis*, thought that mentally disordered people suffer from *dyscrasia*, i.e., a bad mixture of humours. Their brains are corrupted by ascending fumes, which causes strong movements in the brains and a confusion in their animal spirits. The functions of imagination are affected by the infection in the brain, and consequently the sensory powers do not admit the dominion of the superior judging power.

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The rational power is, therefore, hindered from distinguishing between a real thing and a phantasm or species (c).

In his encyclopaedia (which was already translated into English in the fourteenth century), Bartholomaeus Anglicus estimates, referring to Galen and other authorities, that melancholics are often afraid of various things. It is, according to him, inevitable that persons, whose brain is covered by dark melancholic fume, are afraid, since they carry the reason of fear with them (d). (For the Galenic background of this and other symptoms, see p. 602 above; cf. 2b below.) It was usual to assume that the confusions in imagination originate in the body. According to Ockham, frenetics and persons in a fury are wrong because their imaginative acts, due to their bodily disposition, differ from the acts of those in good health (*Quodlibeteta septem* III.20 (OTh 9, 282–283)). Even human behavior of a certain kind was thought to cause madness. According to Gerson, excessive asceticism may produce incurable diseases of the brain and, as a result of these, mania (*mania*), madness (*furia*), or melancholic passions (*passio melancholica*) can make images appear inside the brain in such a way that people think that they perceive things which are not actually perceived by the exterior senses. In extreme cases people may regard themselves as something other than they are (for example, various animals, or even dead) (e). Gerson warns that excessive asceticism may destroy the body, ‘debilitate’ and ‘evacuate’ the brain, and give rise to melancholic insanities (Jean Gerson, *Lettre au solitaire Antoine, reclus du Mont-Valérien, Œuvres* II, 82). For the typologies of madness in the Middle Ages, see Neaman 1975, 89–91; Fritz 1992, 7, 133–138, 157–160. For madness-concepts among the physicians, see Kemp 1990, 116–121.

2 Discussion on Demons

a. *A peasant became insane after sleep since he appeared to have listened to demons in his sleep, and sometimes he laughed and sometimes lamented.* I reply. The cause was a melancholic humour ascending to the head. A melancholic fume is in itself black, and therefore the person imagined black bodies like demons. (*The Prose Salernitan Questions* (Ba, 79))

b. The same thing happens with maniacs and melancholics. Whether their passion is immediately established in the brain or in the stomach or in the abdomen, it always takes place because of the ascent of the melancholic steams to the brain, which produces phantasms. And the power of fantasy judges, as earlier, and says that all are black and diffused, and this is said to be miraculous and strange. And these people are said to be demonic. And since their soul carries the reason for its fear with it, they are constantly in fear and they are said to fear the demons they have seen. (Witelo, *De causa primaria* (9, 359–365))

c. ...those who do not know immediate and natural causes [for a maniac's experience] resort to demons, others to heaven, others to God [as a cause]. And since these things look marvelous, people attribute so etc., and this is wrong. (Nicole Oresme, *De causis mirabilium* 3 (262. 898–900))

d. That such things often happen without demons is demonstrated. It is sure from innumerable experiences and medical authors and other histories that in many accidents and in many sicknesses and species of mania the same thing is often caused by various causes, namely that sick people presume to see and hear demons and many other fantastic things, none of which exist in the external world. But all this happens because of a defect in the organs of the interior senses and because of the corruption of the interior apprehensive power, whether imaginative or estimative, because of an infection of the brain or because of another cause, sometimes in the heart. (Nicole Oresme, *Tractatus de configurationibus qualitatum et motuum* II.29 (344–346. 3–11))

e. ... [a bad angel] cannot cause anything other than an excessive imagination, and then it can generally cause a natural intellection, which is born to accompany such an imagination. So this should rather be called a fury than a rapture... (John Duns Scotus, *Reportatio Parisiensis* II.11.1, n. 6 (ed. Wadding 11.1, 309–310)).

In the *Prose Salernitan Questions* a natural explanation is given to the experience of a peasant who thought he had heard demons: because black melancholic humour had ascended to the head, the person imagined black demons (**a**). Witelo applies the same explanation to the experiences of maniacs and melancholics. The mental disorders of those people are caused by melancholic fumes which ascend to the brain and affect imagination (**b**). Oresme remarks that those who do not know the immediate and natural causes for maniac's experiences refer to demons, heaven or God as causes (**c**). According to him, it is certain from innumerable experiences, and medical and other authorities, that seeing and hearing demons and other fantastic things often happens because of natural reasons to those who suffer from some species of mania. These sights and hearings arise from defects in the organ of the interior sense and from the dysfunction of the interior apprehensive faculty (**d**). While medieval writers did not deny the possibility that a demon could, in principle, make somebody mad, they still did not think that a demon could directly put intellections in people's minds. Scotus, for example, thinks that a bad angel can make someone imagine something excessively, and by this means disturb the intellect. The effect of the devil can be so strong that the person goes mad (**e**). It was usually thought that demons or fallen angels can only cause physical changes of the spirits or humours and, through them, indirectly affect the sensory soul and also the intellectual soul. (See, e.g. Thomas Aquinas, *Summa theologiae* I.111.3)

3 Special Capacities

a. This is also the case with frenetics and the alienated, although in them the intellectual power, which should to be united with sensible forms in image, is impeded with respect to inferior comprehension because of an infection of the imaginative power and confusion, and the intellectual power cannot be illuminated. However, according to ‘the superior face’ it is sometimes illuminated from irradiation, which comes from the first light, or from the middle lights, namely from angels. And so the frenetics also prophesy and sometimes see many eminent things, although they cannot reason on the basis of these senses. (John of la Rochelle, *Summa de anima* 45 (147.162–170))

b. Separate intelligences have an influence on the souls connected with bodies, but this influence is not continuous since it is not received in the soul unless it converts itself from temporal things to eternal ones and releases itself from bodily and earthly lusts. It does not matter whether this release happens through quieting the animal sensory natural powers, like in epileptics or sometimes in sleeping people, or in other ways, like in very melancholic learners (which could be applied to almost all ancient philosophers, as Aristotle says in his book *De problematibus*), or in people who concentrate very much on contemplation. And then the soul, returning to its substance, sees many things as they really are, and it often foretells in sleep the order and mode of future things, if the power of imagination does not impede it... (Witelo, *De causa primaria* (4, 146–157))

c. ...as Jerome says and experience teaches: there are several things which are impossible for healthy people but possible for mad people: madness makes people have certain acts and passions which would not otherwise be possible for them: we see mad people stay out in the open for a long time, eat raw food, consider themselves as beasts, wild beasts, with which they are friends. (Nicholas of Lyra, *Postilla, Biblia Sacra* IV (304D))

d. And so we see that some frenetics become one hundredfold stronger and quicker than they were before the frenzy; they could not even move themselves earlier, and afterwards they cannot be held down by many men. (Nicole Oresme, *De causis mirabilium* 4 (284.148–151))

e. And so it is imaginable that some maniacs see, for some time, more clearly, since perhaps the spirits flee by *antiperistasis* and are rarefied or because the spirits are not impeded as to other things, and then the soul is more powerful; from this we see that a contrary sometimes strengthens the other. (Nicole Oresme, *De causis mirabilium* 4 (286.160–163))

f. Now it has to be demonstrated that some of these [fantastic sights and hearings] happen principally because of the soul withdrawing or receding inside, and because of the retraction of the sensitive animal spirits to the interior virtues. The soul in this way withdrew and recollected – not in itself but in its spirits – indeed, has a miraculous power. A sign of this is that in those possessed and epileptics, because

of an illness, the spirits are withdrawn and isolated inside, like in epileptics: at the time when they fall, the exterior senses are deadened so that they do not see or hear, and the interior virtue acts. Some of these people have marvelous visions in their ecstasy. Afterwards they say they have seen many things. Sometimes they even foretell the future and reveal hidden things. (Nicole Oresme, *Tractatus de configurationibus qualitatum et motuum* II.29 (346.19–28))

John of la Rochelle connected the prophesying of the frenetics and the alienated with God or angels. The ‘superior face which is illuminated’ refers to the higher part of the intellect in Avicennian jargon (see *Kitāb al-najāt*, trans. Rahman, 33) (a). According to Witelo, epileptics and melancholics (and sleeping persons) may see future things because of the effects from separate angelic intelligences, when there is no impeding imagination (b). Nicholas of Lyra thinks, referring to Jerome and experience, that there are several things which are possible for the mad people but not for the healthy, such as living and behaving like beasts and having friendships (*amicitia*) with them (c). Oresme joins the traditional view that some frenetics may become extraordinarily strong and quick (d). He also finds it conceivable that some maniacs see some things, for some time, more clearly than healthy people. He does not seem to be completely sure why this is so. It may be, he thinks, because the spirits of the maniacs flee by *antiperistasis*, and are rarefied. It may also be that the spirits in this situation are not impeded as to other things, and then the soul is more powerful (e). According to Oresme, some of the fantastic sights and hearings happen because of the withdrawing or retracting of the soul inside, and because of the retraction of the sensitive animal spirits to the interior capacities (f).

4 Moral and Theological Applications

a. ...sensory passions which are not in our power ... such are sorrowing or rejoicing, which happen to children and fools who do not have the use of reason. Because of them, therefore, people are not praised or accused. (William of Ockham, *Quodlibeta septem* II.17 (OTh 9, 188. 52–53, 56–58))

b. ...or fury comes after a marriage is established or consummated, and it does not cancel the marriage. If...fury precedes a marriage, does the person have lucid intervals or not? In the latter case, there is no contract of marriage with that person, for such a person cannot consent, and there is no contract of marriage without a mutual consent of free will. If the person has lucid intervals, but he or she makes a contract of marriage in the time when he or she is not lucid, then the same can be said. If the person makes a contract in the time when he or she is lucid, then the marriage is valid, since he or she can consent in that interval. (Richard of Middleton, *Super quatuor libros Sententiarum quaestiones* IV.34. 2.1 (IV, 479))

c. Some of the insane have been in this state since their birth without any lucid intervals and without any signs of the use of reason. As for the susceptibility of baptism, the same seems to apply to them as to children who are baptized according to the faith of the Church ... Some have lucid intervals in which they can use right reason. If they then decide to be baptized, they can be baptized even when they later are insane. (Thomas Aquinas, *Summa teologiae* III.68.12)

Because they lack the use of reason, the wills of mentally disordered people are incapable of performing their due functions, such as controlling the sensory passions. Therefore, such people may, Ockham thinks, have sorrows and joys that they cannot control (a). According to Richard of Middleton, a mad person without lucid intervals is not to be married, since he or she cannot consent (*consentire*), and for marriage, there has to be an agreement of *liberum arbitrium*. If a mad person has lucid intervals, he or she can consent and *a fortiori* marry. However, if a person goes mad after marriage, the marriage is not cancelled (b). Thomas Aquinas thinks that the insane who never have or have had the use of reason are baptized without their own consent, like children. Those who sometimes have or have had the use of reason, are baptized according to their own consent, given when they are in their right mind (c).

Chapter 37

Early Modern Theories

Timo Kaitaro

The discussion on mental illness in Renaissance medical treatises followed ancient and medieval guidelines. Galen's works were edited and studied together with the major Arab and Latin commentaries. Much attention was paid to the typical symptoms of melancholy: the impairment of the rational faculty and the experience of groundless fear and sorrow. The cause of melancholy was the excess of black bile which affected the brain and the spirits. There was an increasing interest in the various forms of melancholy, and non-medical writers also treated melancholy as a source of mental suffering. In some treatises melancholy was regarded as an epidemic nuisance. The melancholic-type person was dealt with in physiognomic typologies of temperaments which were associated with four bodily humours (phlegm, bile, blood and black bile). Many authors drew on the remark in Pseudo-Aristotle's *Problems* 30 according to which a moderate amount of black bile might make people exceptionally talented. This speculation was supported by Marsilio Ficino's treatise on the melancholic condition, which he said was marked by symptoms from depression and hallucinations to exceptional creativity. While most medical authors avoided religious speculations, the rise of occultism and witchcraft persecution in later sixteenth century supported demonological explanations of melancholy. Academic authors often applied the medieval medical idea according to which it was probable that, medically speaking, the experiences of 'demonic possessions' were caused by melancholy, but they usually did not exclude the possibility that the devil might cause madness by disordering the humours and vital spirits. In the seventeenth century, scepticism about this emerged among learned people (1). For madness in sixteenth- and seventeenth-century literature, see Midelfort 1999, Gowland 2006a.

Descartes famously argued that the contents of imagination are determined by the movements of the animal spirits in the pineal gland, and the Cartesian authors

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explained melancholy by referring to irregularities and disorders of these movements, or alternatively by deficits in the solid parts of the brain which influence the flow of the spirits. The disordered flow of animal spirits explained the corresponding disorder of ideas, their haphazardness or lack of a logical order, in the minds of madmen (2). When the existence of brain ventricles and animal spirits began to be questioned, similar mechanistic explanations referring to novel models of neural transmission could be proposed, for example the explanations of David Hartley (d. 1757) or William Battie (d. 1776) which invoked the vibrations of the fibres or the mechanical properties of the fibres in the brain. See Berrios and Markova 2002.

In the latter half of the eighteenth century the vitalist tradition, originating in the medical faculty of Montpellier as a critical reaction to iatromechanism, considered disturbances in the viscera and in the nervous structures attached to them as the immediate organic causes of madness (the ultimate causes were, however, often considered to be psychological). In the theories of the Montpellierian vitalists and in Diderot's philosophical writings, the mechanical explanations dealing with movements of the animal spirits in the brain were replaced by organist explanations referring to the interactions between different organs, usually the brain and the visceral centres (the phrenic centre or the lower abdominal region). Health was regarded as a healthy balance between diverse organic centres and pathology as a disturbance in the balance of organic forces: in this way the state of the viscera could influence the state of the brain, and consequently that of the mind, and reciprocally mental disturbances were reflected in the state of the viscera (which in turned affected the brain). These ideas were propagated in Diderot and d'Alembert's famous *Encyclopédie*, for which notable Montpellierian doctors, such as Théophile de Bordeu (whom Diderot staged in his dialogue *Le rêve de d'Alembert*) and Ménéret de Chambaud, contributed articles. The medical articles of the *Encyclopédie* dealing with the traditional forms of madness, such as melancholia, mania or frenzy, are based on these vitalist theories (3).

1 Varieties of Melancholy in Sixteenth- and Seventeenth-Century Thought

a. We define melancholy with the good authors as a reverie without a fever, accompanied by an ordinary fear and sadness without apparent reason ... We use the term 'reverie' when the noble powers of the soul, such as imagination or reason, are depraved. All the melancholic have a troubled imagination, because they forge thousands of fantastic chimaeras and objects which do not exist: their reason is also often depraved ... All the Greek and Arab physicians think that the cause of this accident is a similar illness, i.e., the cold and dry intemperament of the brain. The brain is thus offended – not in its conformation, since there is neither a tumour against nature nor are the ventricles pressed nor full as in apoplexy and in epilepsy – but in its own substance and temperature ... There are three kinds of melancholy: the first arises from a defect in the brain itself, the second from the sympathy of the whole body when the whole temperament and the whole habitude is melancholic,

and the last in addition is called hypochondic ... or windy. (Du Laurens, *Discours de la conservation de la vue* 2.4)

b. This for the most part is settled in the splene, and with its vapours annoyeth the heart, and passing up to the braine counterfetteth terrible objects to the fantasie, and polluting both the substance, and spirits of the brayne, causeth it without externall occasion, to forge monstrous fictions... (Timothy Bright, *Treatise of Melancholy* (100))

c. His Sleeps and his Wakings are so much the same, that he knows not how to distinguish them, and many times when he dreams, he believes he is broad awake and sees Visions. The Fumes and Vapours that rise from his Spleen and Hypochondries have so smutched and sullied his Brain (like a Room that smoaks) that his Understanding is blear-ey'd, and has no right Perception of any Thing. His Soul lives in his Body, like a Mole in the Earth, that labours in the Dark, and casts up Doubts and Scruples of his own Imaginations, to make that rugged and uneasy, that was plain and open before. His Brain is so cracked, that he fancies himself to be Glass, and is afraid that every Thing he comes near should break him in Pieces. Whatsoever makes an Impression in his Imagination works it self in like a Screw, and the more he turns and winds it, the deeper it sticks, till it is never to be got out again. The Temper of his Brain being earthy, cold, and dry, is apt to breed Worms, that sink so deep into it, no Medicine in Art or Nature is able to reach them ... He converses with nothing so much as his own Imagination, which being apt to misrepresent Things to him, makes him believe, that it is something else than it is, and that he holds Intelligence with Spirits, that reveal whatsoever he fancies to him ... (Samuel Butler, 'A Melancholy Man', from *Characters and Passages from Note-Books*, ed. Waller 1908 (59–60))

d. Being then as it is, a disease so grievous, so common, I know not wherein to doe a more generall service, and spend my time better, then to prescribe meanes how to prevent and cure so universall a malady, an Epidemicall disease, that so often, so much crucifies the body and the minde. (Robert Burton, *The Anatomy of Melancholy* (110))

e. Our Plato seems to approve this in the *Phaedrus*, saying that without madness one knocks at the doors of poetry in vain. He might mean divine madness here, but according to physicians, madness of this kind is never incited in any other than melancholics. (Marsilio Ficino, *De vita libri tres* I.5 (8))

f. The opinions of the world, both in ancient and later ages, concerning the cause of madness have been two. Some, deriving them from the passions; some, from demons or spirits, either good or bad, which they thought might enter into a man, possess him, and move his organs in such strange and uncouth manner as madmen use to do. The former sort, therefore, called such men, madmen: but the latter called them sometimes demoniacs (that is, possessed with spirits); sometimes energumeni (that is, agitated or moved with spirits); and now in Italy they are called not only pazzi, madmen; but also spiritati, men possessed ... And whereas our Saviour speaketh of an unclean spirit that, having gone out of a man, wandereth through dry places, seeking rest, and finding none, and returning into the same man with seven other spirits worse than himself; it is manifestly a parable, alluding to a man that, after a little endeavour to quit his lusts, is vanquished by the strength of them, and

becomes seven times worse than he was. So that I see nothing at all in the Scripture that requireth a belief that demoniacs were any other thing but madmen. (Thomas Hobbes, *Leviathan* I.8)

g. Difference between idiots and madmen. In fine, the defect in naturals seems to proceed from want of quickness, activity, and motion in the intellectual faculties, whereby they are deprived of reason; whereas madmen, on the other side, seem to suffer by the other extreme. For they do not appear to me to have lost the faculty of reasoning, but having joined together some ideas very wrongly, they mistake them for truths; and they err as men do that argue right from wrong principles. For, by the violence of their imaginations, having taken their fancies for realities, they make right deductions from them ... But there are degrees of madness as of folly; the disorderly jumbling ideas together in some more, in some, less. In short, herein seems to lie the difference between idiots and madmen. That madmen put wrong ideas together, and so make wrong propositions, but argue and reason right from them. But idiots make very few or no propositions, but argue and reason scarce at all. (Locke, *An Essay Concerning Human Understanding* II.11.13)

Andre de Laurens, the chief court physician to King Henry IV of France, summarizes traditional medical views in his treatise *Discours de la conservation de la vue, des maladies mélancoliques, des catarrhes et de la vieillesse* (**a**). This work was translated into English in 1599 under the title *A Discourse of the Preservation of Sight: Of Melancholike Diseases, of Rheumes, and of Old Age*. For modified Galenic discussions of mental disturbances in sixteenth-century medicine, see Siraisi 2012. Traditional ideas are also put forward, e.g., in Timothy Bright's treatise from 1586 (**b**) and in the notes of Butler, a seventeenth century poet and satirist (**c**). Robert Burton's *Anatomy of Melancholy* (1621) is an extensive treatise on melancholy as a physical illness and on related mental and spiritual symptoms which he characterises as epidemic (**d**). As the social causes of depressive symptoms, Burton refers particularly to extravagant amorous passions and religious enthusiasm. See Gowland 2006a; for love sickness as a branch of melancholy in Arab medicine, see Wack 1990. As part of his Neoplatonic syncretism, Ficino associated the Platonic divine inspiration with a melancholic physiognomic type (**e**). He also connected this condition with the astrological influence of Saturn. Many Renaissance authors found this occultist theory of the melancholic genius inspiring. (See Klibansky et al. 1964.) The influences of the planets and angelic or demonic spirits were also drawn on in Paracelsist theories of melancholy. See Midelfort 1999, 113–132. Hobbes argued that biblical stories of demonic possessions should be not understood literally (**f**). Many medically oriented authors were sceptical about possession and exorcism, but they admitted, like medieval writers, that evil spirits may cause hallucinations and other melancholic symptoms through physiological changes. See Gowland 2006b.

2 Cartesian Themes

a. [I]t is the soul which sees, and not the eye; and it does not see directly, but only by means of the brain. That is why madmen and those who are asleep often see, or think that they see, various objects which, in spite of this, are not before their eyes, namely when certain vapours disturb their brain and arrange those of its parts normally used for sight in the same way as the objects would do if they were present. (Descartes, *La dioptrique* 6, AT VI, 141)

b. Concerning the third kind of error, that is the speech and action of madmen, who speak and act inappropriately ... I believe, that those who belong to this category, are mad only because the movement of the gland is not under the control of the soul, either because of the violence and uneven flow of the spirits, which carry it [the gland] along without regularity and without measure and trace on it an infinity of species which last but a moment; or then because the flow attaches it stubbornly to some vestiges of memory and evokes always the same species of which the soul cannot be rid. (Louis de La Forge, *Traité de l'esprit de l'homme* 18)

c. By strong and vigorous imagination I mean this constitution of the brain which renders it capable of extremely profound vestiges and traces, and which fill the capacity of the soul so that they prevent attention being paid to things other than those which these images represent ... There are two kinds of persons who have a strong imagination in this sense. The first receive profound traces by the involuntary and disordered impression of the animal spirits; the others, which I mainly will discuss, receive them by the disposition of the brain substance. It is obvious that the first ones are entirely mad, because they are forced by the natural union which exists between their ideas and these traces to think of things which the others with whom they converse do not think. This makes them incapable to speak appositely and to answer questions that one poses to them. (Malebranche, *De la recherché de la vérité* II.3.1.3–4)

Louis de la Forge (1632–1666) was a physician and philosopher and one of the first Cartesians. His account of madness is typical of Cartesian medicine and it is also applied by Malebranche. Cartesian authors typically stress the effects of melancholic disturbances on imagination (**b**). This is also mentioned by Malebranche (**c**). For imagination and madness in the Renaissance period, see p ... above; Gowland 2006a, b.

3 Madness and Eighteenth-Century Vitalists

a. Taking account of all these observations and the common causes of this malady [melancholy], one is tempted to believe that the symptoms that constitute it are most often excited by some defect in the lower abdominal region, especially in the epigastric region. There is all reason to believe that the immediate cause of

melancholy commonly lies there, and that the brain is but sympathetically affected. In order to verify that a disturbance in these parts can excite a melancholic delirium, one must pay attention to the most elementary laws of animal economy [i. e. physiology] to remember that these parts are filled with a large amount of extremely (sensitive?) nerves, to consider that their lesion causes trouble and disorder in the whole machine and is sometimes followed by imminent death, to consider that the inflammation of the diaphragm causes a frenetic delirium, known as parafrenzy, and, finally, it suffices to know that the ascendance and the influence of the epigastric region on the rest of the body, mainly on the head, is considerable; it is not without reason that van Helmont placed there an *archée* which governs the whole body, the nerves distributed there serving as reins directing its actions. (*Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers*, ed. by Diderot and d'Alembert, X, 309a–b)

b. In order to cure melancholy with success, one must start by curing the mind and attack the defects of the body afterwards, in the case that they are known; to do this the prudent physician must know how to gain the confidence of the patient, must enter his idea, adapt to his delirious ideas, appear to be persuaded that things are as the melancholic person imagines, and then promise radical cure; and for effecting this, he is often obliged to take recourse to peculiar remedies; thus, for example, when the patient believes that there is a living animal in his body, one must pretend to remove it; if it is in the stomach, one can effect this with an effective purgative, throwing this animal skillfully into the bedpan, without the patient noticing; [...] (*Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers*, ed. by Diderot and d'Alembert, X, 310a)

The articles on traditional forms of madness in Diderot and d'Alembert's *Encyclopédie* were based on Montpellierian vitalist theories. Although the immediate causes of mental illnesses were considered to be organic, the *Encyclopédie* emphasizes the role of beliefs in creating the 'habitual sense of our imperfection' or a 'sadness arising from the false idea that religion proscribes innocent pleasures', characteristic of melancholy and causing organic changes by the sympathetic affection of the brain due to the interaction between the organic centres. The therapeutic measures mentioned in the articles dealing with melancholy include, in preference of pharmaceutical or surgical measures, the recourse to diet, to the six Galenic 'non naturals' (air, the matter of food and drink, movement and rest, sleep and waking), to travelling, to riding, or to 'venereal exercises' (especially when the pathology is due to their privation). But insofar as psychological factors, such as affections and beliefs, lay at the root of the pathology, it is recommended that one starts by curing the mind first and attacking the bodily defects afterwards. Since melancholy is primarily caused by false opinions, one should try to change them, even if it may involve some ruse on the part of the physician.

Part XIII
Physiognomy

Chapter 38

Ancient Physiognomy

Marke Ahonen

Physiognomy (Greek *fysiognōmonia*), the art of determining a person's character from his external features, was held in high esteem in the ancient world. The famous story of Socrates and Zopyrus, in which the physiognomist Zopyrus deems the philosopher to be of a naturally stupid and lustful disposition because of his crude facial features, suggests that physiognomy was well-established as a practical art at least from the fourth century BCE onwards. (See R. Foerster, *Scriptores physiognomnici* 1893, I, viii–xiii; this is the standard edition of ancient physiognomical treatises.) Physiognomy was viewed favourably by many philosophical and medical authors, but there was no general agreement on its theoretical basis, and the extant physiognomical treatises are mostly practical handbooks containing relatively little discussion about the legitimacy of the art. Still, they all make reference to the close interrelationship between the body and the soul, which underlies the art: Bodily events cause changes in the soul, mental events affect the body, emotions take on a visible manifestation in facial expressions and gestures, and basic bodily qualities, such as the temperature and density of one's blood, may even determine one's mental characteristics. At the very least, these are found to invariably coincide with certain psychic characteristics in all animal kingdom. Evidently, ancient physiognomical authors felt no need to commit themselves to any exact psychophysical theory: the art of physiognomy was a respectable one, with a long tradition, and appreciated mostly for its practical applicability, as it helped one to gauge potential friends and enemies. Thus, the discussion on the methodology of physiognomy is often descriptive in kind, and various approaches to the application of the art are encouraged (1). Apart from establishing similarities between humans and non-human animals, the analysis of the psychophysical differences between the sexes and different ethnicities was among the most standard approaches to the art (2).

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The three extant major works of ancient physiognomy are those of Pseudo-Aristotle, Polemon (second century CE), known through Adamantius' Greek paraphrase and a complete Arabic translation, and an anonymous Latin author (probably third or fourth century CE). Aristotle is generally considered not to be the author of the Aristotelian *Physiognomy*. Still, it is a Peripatetic work, and by far the oldest of the surviving ancient physiognomical texts. Polemon's original *Physiognomy* is lost, but we are in possession of a complete Arabic translation (the Leiden Polemon) and an extensive Greek paraphrase by Adamantius (fourth century AD) which adequately compensate for the loss.

The work of Pseudo-Aristotle is made up of two separate treatises. Both treatises start with some discussion on the justification of physiognomy and on the methodology of its application. Given the shortness of the treatises, the extent of the theoretical part is considerable. Still, most of the treatises consist of practical, catalogue-type observations. Treatise A features a list of the types of men (e.g., 'merciful', 'talented'), with their corresponding physical characteristics, while treatise B proceeds by the parts of the body, cataloguing the variations occurring in the bodily parts and the mental characteristics these variations indicate. The treatises show physiognomy as a well-established art, with various but compatible methods and approaches.

Polemon's *Physiognomy* is a practical handbook with little theoretical discussion. Towards the beginning, the general principles of the art are laid out: in addition to ethnic features (1, 2), the physiognomist must look for signs of pronounced masculinity and femininity, youthfulness and old age, and seek to establish the similarities between the 'sitter' and non-human animals (1, 4). Most of the work consists of short chapters discussing bodily parts, the gait and the voice and the inferences that can be derived from these. The work ends with a list of types of men. The Leiden Polemon includes, in addition, an extensive list of various animals with their typical mental characteristics, and some lively descriptions of people Polemon had personally encountered and assessed.

The anonymous Latin *Physiognomy*, which relies heavily on Polemon and, to lesser extent, on the Aristotelian *Physiognomy*, dates probably from the third or fourth century CE. A third source explicitly mentioned by the author is the elusive Loxus, possibly a Peripatetic author of whose physiognomical work nothing remains. The Latin treatise shows more theoretical interest than Polemon's *Physiognomy*, but it is still a practical handbook. Most of the work consists of analysis of the bodily parts and their signs, and a 'list of types' is also included, along with a 'list of animals'.

Scattered remarks on physiognomy can be found in the ancient philosophical and medical literature. In addition, there are numerous passages in the non-scientific literature that betray a physiognomical interest. For a full collection of texts and passages, see Foerster 1893. The Stoics took interest in the physical manifestations of virtue and vice in persons (3), while Galen considered physiognomy a respectable art which served to illustrate the close interdependence of the body and the soul (4).

1 Methods of Physiognomy

a. The physiognomists of the past have attempted three methods in practising their art, each applying one of these methods. Some base their physiognomy on the genera of animals. For each genus, they posited a certain appearance and a mental disposition which follows this kind of body, and then they assumed that a man having a body similar to the animal has also a similar soul. Others have done the same, but they have based their assessment not on all animals but on the human race only. They have distinguished between different nations, establishing the differences of appearance and character of, for example, Egyptians, Thracians and Scythians, and they have chosen their signs similarly to the first group. Others, again, have based their art on the characteristic facial expressions, establishing the kind of disposition (anger, fear, or sexual desire, for example, and so on with the rest of emotions) each expression accompanies. All these methods are legitimate in practising physiognomy, and others as well. (Pseudo-Aristotle, *Physiognomy* 1, 805a18–32)

b. Physiognomical inferences are made on the basis of movements, gestures and colours, and characteristic facial expressions, and the growth of the hair and the smoothness of the skin, and the voice, and the constitution of the flesh, and the parts of the body and the type of the body as a whole. (Pseudo-Aristotle, *Physiognomy* 2, 806a28–33)

c. Those who have thick necks are strong in their souls; the reference is to the male type. Those who have thin necks are weak; the reference is to the female type. Those who have thick and full necks are spirited; the reference is to the bull. Those who have well-sized but not too thick necks are magnanimous; the reference is to the lion. Those who have thin and long necks are cowardly; the reference is to the deer. Those who have very short necks are wily; the reference is to the wolf. (Pseudo-Aristotle, *Physiognomy* 6, 811a10–17)

d. Most of the signs, and the substantial signs, have their seat in the eyes, for the soul is revealed through them as if through a pair of gates. (Adamantius the Sophist, *Physiognomy* I.4)

e. Merciful men are delicate, with pale skin and glossy eyes; the top of their nose is wrinkled, and they are constantly shedding tears. These same men are fond of women, beget female children, and in character they are erotically inclined, have a good memory, and are talented and hot ... The wise, cowardly and modest type tends to be merciful, whereas the ignorant and shameless type is without mercy. (Pseudo-Aristotle, *Physiognomy* 3, 808a33–808b2)

f. The tortoise is a lazy, stupid and greedy animal that is of no use to either itself or anyone else. A woman referred to this type of animal is as follows: short neck, broad back, broad feet, wrinkled face and very wrinkled cheeks. A woman of this type is foolish, futile and unpleasant. (Anonymus Latinus, *Physiognomonica* 127)

Aristotle was not the author of the *Physiognomy*, but he discusses the possibility of physiognomy favourably in *Prior Analytics* II. 27, 70b7–32, and there are numerous references to observations which can be regarded as physiognomical in the biological works of the corpus, for example in *Historia animalium* I. 8–10, 491b10–492a12. For further references, see Boys-Stones 2007, 44–46. The *Physiognomy* attributed to Aristotle consists of two separate treatises (here A and B). The first extract is from the treatise A which, after offering some general arguments for the legitimacy of the art, goes on to describe the principal methods of physiognomy (a). The method drawing its conclusions from the resemblances of the ‘sitter’ to non-human animals was, it seems, the most widely-applied in the ancient physiognomical practice, but the extant sources show that all three methods delineated here tended to fuse together in an uncomplicated manner. The treatise A comments on the potential pitfalls in applying the methods (for example, one may falsely take a facial expression due to a transient emotion as an indication of a permanent mental characteristic), and suggests, as a novelty, a fourth method, based on establishing interdependences between various mental properties. For example, if the combination of irascibility, sulkiness and bitterness is known to involve necessarily also enviousness, the physiognomist can infer a person’s envious disposition even when he is unable to detect any external signs of this particular characteristic (2, 807a3–10).

The treatise A lists the sources from which all physiognomists, the author asserts, derive the signs they interpret (b). Evidently, the list follows no order of importance. The ancient physiognomists seem to have been most interested in the relative proportions of the bodily parts and features (especially facial features), in the texture and colouring of the parts, and in the quality, quantity and location of the hair on the body. However, all principal authors warn against paying too much attention to single, isolated signs, and advise one to look for the general impression the person being assessed makes. In an ideal case, the person’s bodily shape and colouring, facial expressions, gait and gestures are all in agreement and point to the same mental characteristics, but if not, the assessor must concentrate on the most important features. Usually, it is the face that offers the most reliable evidence (cf. 6, 814a9–b9).

Typically, the ancient physiognomical writers discuss one bodily part at a time, describing a number of possible physical variations in the part, and the mental characteristic these indicate. This is the principal mode of conduct in the treatise B (c). In this work the discussion of the parts appears to follow a reversed order of importance, for it starts with the feet and proceeds upwards to the head, the author enumerating various types of lips, noses, eyes etc. However, even though the facial features are of great importance, the eyes are not assigned any special role in the physiognomical assessment. This is in stark contrast with Polemon, who regards eyes as the most important source

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for the assessment, describing them as the gates revealing the soul (**d**), and dedicating the whole of his first book to a detailed analysis of different types of eyes. Other parts are discussed more cursorily.

In addition to analysing singular parts of the body, the physiognomical authors compiled lists of the types of men, with their distinctive external and mental characteristics. In treatise A, twenty-one types are listed and delineated, ranging from the 'brave' and 'cowardly' types to gamblers and sexual deviants. However, as the passage (**e**) shows, the types are not mutually exclusive, and a single person can exhibit several of the psychophysical property clusters. Moreover, even though the 'talented' man is evidently preferable over the 'stupid', and the 'brave' man over the 'cowardly', there is no clear dichotomy between 'good' and 'bad' types. In the merciful (*eleēmōn*) type, for example, feminine features (delicacy, paleness, emotionality) which may hint at cowardice and lack of self-discipline combine with the evidently desirable properties of talent and 'hotness'. The 'hotness' (the men are described as *enthermoi*) is probably intended as a reference to exceptional agility and mobility of the soul, enabled by the hotness of the inner parts of the body (cf. the treatise on the talented melancholic in the Aristotelian *Problems* XXX, 1). A 'list of types' is also given in Polemon and Anonymus Latinus. Both lists rely heavily on that of Pseudo-Aristotle.

Sometimes the physiognomical handbooks also contained lists of animals, succinctly cataloguing the mental characteristics of each animal and, at the same time, of the human who externally resembles that particular animal. Such a list is found in Anonymus Latinus. In (**f**), quite exceptionally, the human counterpart of the animal described is female. Perhaps the author intended to warn the reader against marrying a woman of tortoise-like appearance; for this application of physiognomy, see Stobaeus IV, 22d, 102. The list of animals which concludes the anonymous Latin treatise seems to derive from Loxus. Little is known of this elusive figure, but the author refers to Loxus' theory of the blood as the 'seat of the soul': its qualities inform both the mental and physical properties of a person or an animal (chs. 2 and 12).

Physiognomy was sometimes criticised for its lack of theoretical depth; cf. **4b** below. Pliny the Elder, for one, regards it as potentially detrimental, warning especially against paying attention to signs indicating short duration of life, as this can cause unnecessary distress (*Naturalis historia* XI, 273).

2 Gender and Ethnicity

a. We must divide the whole animal kingdom into two types, male and female, and attach to each gender what is suitable to it. In all animals which we attempt to breed the female are gentler and softer in the soul than the male, but less vigorous, and they are more easily adapted to being fed and handled. Being like this, they are less

spirited than the male ... It seems to me that the female are also more importunate, and more reckless and feebler than the male ... This too is clear, that in every species the female has smaller head, narrower face and more slender neck than the male; its breast is weaker, is has smaller ribs, and its hips and thighs have more flesh around them; the female are knock-kneed, with slender calves and more delicate feet, and the whole shape of the body is pleasant rather than noble. (Pseudo-Aristotle, *Physiognomy* 5, 809a28–809b10)

b. The masculine character is vehement, easily provoked to action, never resentful, generous, straight, cannot be duped or won through cunning or plot, eager to win through its own merit, magnanimous. The feminine character is clever, prone to anger, resentful, merciless and envious, easily tired of work, docile, cunning, bitter, reckless, and cowardly. (Anonymus Latinus, *Physiognomonica* 4)

c. If there are people in whom the Greek and Ionic race has been preserved pure, these are rather large men, fairly broad, upright, firm, rather fair-skinned and blond; the mixture of their flesh is moderate and rather firm, their legs are straight, extremities well-formed; the head is of a medium size and round, neck robust, hair rather blond, fairly soft and lightly curly; the face is square, lips are thin, nose is straight, eyes are moist, dark blue, intense, and there is much light in them; for the Greeks have the best eyes among all nations. (Adamantius the Sophist, *Physiognomy* II.32)

Pseudo-Aristotle mentions the psychophysical differences between nations as one of the major sources for physiognomical inference (see **1a** above), but does not develop the idea further. In something of a contrast with the treatise A, the treatise B emphasises the importance of distinguishing between feminine and masculine features. In all the animal kingdom, feminine appearance, characterised by delicate and soft features, indicates a meek and petty-minded character, whereas spiritedness and magnanimousness are associated with the more robust masculine type of appearance (**a**). This doctrine is taken up and further elaborated by both Polemon and Anonymus Latinus (**b**). Polemon (in Adamantius' treatise) describes the appearance of a person representing the 'pure' Greek type (**c**). This type has become increasingly rare due to migrations and mixing of different races. Externally, the 'pure' Greeks are halfway between the pale and lank-haired northern nations and the dark and curly-haired southern nations. Evidently, their mental properties, too, represent a balanced middle between the brave, rash and simple-minded northern peoples and the wily and cowardly southern peoples, even though this is left implicit. Indeed, the description is notably similar to that of the 'talented (*eufyēs*) man' (II.46). There is also a passing reference to racial differences being due to climatic conditions (in the south, the 'mixture' is dry and hot, whereas in the north it is moist and cold (II.31)). In Galen's psycho-physiological interpretation, northern peoples have cold (and therefore pale, soft and hairless) skin, as all heat has retreated to inner parts because of the surrounding coldness: because of this compacted heat, they are brave and irascible (*De temperamentis*, Kühn 1, 628). The opposite is true of southern peoples. See also **4** below.

3 The Stoics and Physiognomy

a. Zeno of Citium seems to sketch a beautiful and lovely picture of a young man, and this is how he sculpts him: Let his face be pure, his brow not relaxed, his eyes neither goggling nor squinting, his neck not stretched, the parts of his body not languid, but poised, with good tension ... Let his gestures and movements give no hope to the licentious, and let modesty and manliness bloom upon his appearance. (Clement of Alexandria, *Paedagogus* III.11=SVF I, 246)

b. Posidonius links this argument to the evident facts of physiognomy. It is true of both animals and men that broad-breasted and hotter types are always more spirited by nature, whereas broad-hipped and colder types are more cowardly. Men also differ considerably in character as far as cowardice and courage, and love of pleasure and love of toil are concerned, according to the places in which they live, for the emotional movements of the soul always follow the condition of the body, and this condition is greatly influenced by the mixture of the environment. He also says that the blood in animals differs in being hot or cold, thick or fine, and in many other respects, too. Aristotle has discussed these things most thoroughly. (Posidonius, fr. 169.84–96 (Edelstein and Kidd))

The early Stoics believed that virtue and vice, being qualities of the corporeal soul, were reflected in the person's external appearance, and some of them may even have practised actual physiognomy; cf. the story of Cleanthes' exposing an effeminate (*kinaidos*) from the sound of his sneezing (Diogenes Laertius VII.173). However, the excerpt from Clement of Alexandria, in which Zeno describes the outward appearance of an ideal youth (**a**), can be read as a piece of advice for young persons rather than as a physiognomical analysis of the physical properties of a morally superior person. The young man must constantly be aware of his appearance, show his modesty and impassivity by his carefully composed facial expression and controlled countenance, and especially beware of giving signs of effeminacy or sexual availability. On the other hand, the voluntarily controllable characteristics of expression, gestures and gait were among the signs the true physiognomists examined when making their assessment. Of later Stoics, Posidonius may have taken interest in physiognomy proper. In (**b**), he claims that certain external features indicate how the individual (animal or human) is disposed to various emotions. The fragment comes from Galen who presents Posidonius as a proponent of the Platonic psychology against the rationalism of the early Stoics: in Posidonius' view, men's irrational and emotional actions are due to the irrational part in their soul, which in turn is informed by the bodily constitution and environmental factors.

4 Physiognomy and Medicine

a. This is what Aristotle writes in Book I of the *Historia animalium*. He mentions a fair number of physiognomical observations in his other works, too, and I would gladly transcribe some of his passages here, but I do not wish to gain a reputation for being long-winded, nor do I wish to waste anyone's time, when it is possible to use as witness the man who first of all doctors and philosophers invented this art, the divine Hippocrates. (Galen, *Quod animi mores corporis temperamenta sequantur*, Kühn 4, 797–798)

b. Not even those who practice physiognomy give a single interpretation of all parts, for they too have been taught by experience. If a person is very hairy around the chest, they say that he is spirited, but if he is hairy around the thighs, they say that he is sexually lustful. But they do not add the cause. Even when they do note that the person resembles a lion as to his chest, or a goat as to his thighs, they have not found the first cause. For reason seeks to find out why the lion is spirited and the goat sexually lustful. So far they have stated the fact, but they have left out the cause. The scientific man, on the other hand, as in all other cases, seeks to find the causes of these things, too. Because of the uneven mixtures of the parts not only the lion and the goat but also many other animals have different parts for different actions. Aristotle has well discussed these matters more fully. (Galen, *De temperamentis*, Kühn 1, 624)

For Galen, physiognomy is a legitimate and respectable art, invented by the 'divine Hippocrates' and approved of by Aristotle (a). However, he is not so much interested in physiognomy proper, even though he regards the successful practice of physiognomy as a remarkable indication of the fact that the body and the soul are closely interdependent. In *Quod animi mores*, Galen cites several physiognomical passages from Aristotle's zoological works in support of his view that Aristotle, too, regarded the faculties of the soul as being dependent on the physical constitution of the body. Furthermore, he seems to regard the Hippocratic *Airs, Waters, Places* as a contribution to physiognomy, as the treatise describes how the various 'genetic', climatic, environmental, dietetic and cultural factors influence the mental and physical characteristics of peoples living under different conditions. A reference is also made to the Hippocratic *Epidemics*, a work in which some advice is offered on using the patient's outward appearance as an indication of his condition. For physiognomy in Hippocratic works, see Boys-Stones 2007, 94–99. In *De temperamentis (On mixtures)*, Galen criticises doctors who make the false assumption that each and every person has a single temperament or mixture (*krasis*) to his or her body (b). 'Mixture' refers to the balance of the elemental qualities of dry,

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moist, hot and cold in the organs, tissues and fluids of the body. Galen claims that most people are actually not so evenly balanced, but have several different mixtures varying from one bodily part to another, a fact reflected in the less-than-perfect proportions of their bodily parts (head, chest, legs etc.). He notes that even the physiognomists recognise this much, as they take hairiness on the chest and hairiness on the thighs to signify different properties. Their art is, however, lacking in theoretical depth, as the physiognomists are not aware of the causes underlying their observations. For Galen, the cause is obvious: the very same elemental qualities that are observed in the external properties of the body determine the mental characteristics, as he describes in *Quod animi mores*. While *Quod animi mores* takes a favourable view on physiognomy, *De temperamentis* appears somewhat more reserved, emphasising the difficulty of deducing the inner qualities of the body from its superficial properties. Some general inferences are legitimate, though: a hairy chest, for example, indicates hotness of the heart, which inevitably involves spiritedness, as the spirited part of the soul is seated in the heart (*De temperamentis*, Kühn 1, 625). For translations of relevant works, see Singer 1997.

Chapter 39

Medieval and Early Modern Physiognomy

Marke Ahonen

Polemon's treatise and Pseudo-Aristotle's *Physiognomy* were both translated into Arabic in the ninth century. Some parts of the works of Polemon and Pseudo-Aristotle were known in the Latin West through the *Anonymus Latinus*. The Pseudo-Aristotelian *Physiognomy* was translated into Latin in 1260s. Physiognomy was also dealt with in the *Secretum secretorum*, an eighth-century eclectic Arabic work, which was partially translated into Latin in the early twelfth century, and completely c. 1230. Book 8 of the Latin version includes physiognomy. Arabic works on physiognomy include Book II of Rhazes's (Abū Bakr al-Rāzī) tenth-century medical work *Liber ad Almansorem*, translated into Latin in the 1180s. Michael Scot's *Liber physiognomiae*, written at the court of the German king, Frederick II, c. 1230, was a popular work partially based on ancient and Arabic sources. It influenced the chapters on physiognomy in Albert the Great's *Questions on Aristotle's On Animals*. There were commentaries on the Pseudo-Aristotelian *Physiognomy* by William of Aragon (c. 1300), John Buridan, and others, as well as physiognomical discussions in the commentaries on Aristotle's treatises on animals. Rhazes's treatise contributed to combining physiognomy with medical Galenism (1).

Many ancient and medieval physiognomy works were printed in the Renaissance such as the treatises of Pseudo-Aristotle, Adamantius (Polemon), Rhazes, Scot, as well as a large number of commentary works, new handbooks, and practical guides. Some works, such as the commentary on Pseudo-Aristotle by Agostino Nifo, or the introduction to the science of chiromancy and physiognomy by Alessandro Achillini, continued the Italian university tradition of teaching physiognomy as part of natural philosophy. The works of Bartolomeo Della Rocca (or Cocles) were very influential; he associated physiognomy with magical and astrological themes,

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as some later Renaissance authors did as well. Physiognomy was discussed by many medical authors, some of them following Paracelsus's medical philosophy, such as Thomas Browne in the seventeenth century.

In his influential *De humana physiognomonia* (1586), the Italian Giambattista Della Porta presented traditional physiognomic ideas with woodcuts of animals and humans illustrating physiognomic characteristics. Della Porta's work inspired Louis XIV's court painter Charles Le Brun, who prepared a series of pictures representing various emotional face expressions for his lectures on expressing emotions in painting. These lectures were first held in 1668 and published in 1698 with accompanied illustrations. Marin Cureau de la Chambre, the physician of Louis XIV, also discussed physiognomy in his influential publications. The most extensive eighteenth-century work on physiognomy was Johann Caspar Lavater's *Physiognomische Fragmente* (four volumes, 1775–1778). This eclectic treatise about the physiognomy of the face, with numerous illustrations, was often quoted in nineteenth-century attempts to develop scientific physiognomy (2).

1 Medieval Developments

a. When the temperament of the heart is hot, the pulse is rapid and frequent, and the respiration is found to be similar to this. There is much thick hair on the breast, and the breast is also hot to the touch. The person having this kind of temperament of the heart is rash, obstinate, and very irascible. (Rhazes, *Liber ad almansorem* II.10)

b. Big or large eyes, which are very open, indicate a man who is often sluggish, sometimes rash, jealous, partially modest and partially immodest, agreeable, obstinate, vain, easily mendacious, very irascible, with bad memory and thick mind and little intelligence, a man who knows less than he thinks he knows. (Michael Scot, *Liber physiognomiae* III.63)

c. First, one must define the parts of the most perfect animal, i.e. the man, according to the division of his parts, which is called 'anatomy' by the Greeks, and according to the physiognomical signs, and according to the shape of his parts, and then one must compare the parts of other animals to those of man and see whether they are similar or dissimilar. (Albert the Great, *De animalibus* I.1.3)

d. Every practitioner of physiognomy must cautiously collect those signs of the whole body which are not accidentally changed through the effect of some other factor, e.g. from health into illness etc., such as the signs of the eyes, the nose, the ears, the teeth etc. And while the assessment of the physiognomical appearance of a person is based on all these various signs, one should always trust on the general impression and the testimony of the most important parts which we have catalogued above. He who acts otherwise will easily fall into error. (Michael Scot, *Liber physiognomiae* III.102)

e. It should be understood that physiognomy does not impose on men a necessity to act in a bad or good manner, but some probability and near estimation... From this it follows that no certain judgement can be made by means of physiognomy on the acquired habits of men. This is evident, for such habits depend on the will and are not due to the preceding temperament and they cannot be assessed reliably by means of physiognomy. Another conclusion is that it is possible, by means of physiognomy, to assess someone's natural inclinations, that is, one can, by means of external signs, know for certain that such and such a person is naturally not inclined to fraud or generosity or prodigality or luxury and so on ... Another conclusion is that when assessing someone's habits by means of physiognomical signs one must not stick to one sign only. This is proved by the fact that we can see that in some person there is some sign indicating this and yet a number of signs to indicate the opposite. If a person were to judge relying on this one sign only, he would be in error, for one should not judge in this way. (John Buridan, *Questions on Aristotle's Physiognomy*; parts of the Latin text in Ziegler 2007, 295–296)

Rhazes combines physiognomy with Galenic medical views about inner organs and their functions (a). His remarks on physiognomic signs are influenced by Pseudo-Aristotle's *Physiognomy*. Michael Scot was acquainted with Rhazes and the *Anonymus Latinus*; his work involves a great numbers of brief descriptions of physiognomic signs which added to its popularity in medieval and early modern times (b). Albert the Great discusses physiognomy in his commentary on Aristotle's *De animalibus* (*History of Animals*, *On the Parts of Animals*, and *On the Generation of Animals*). Albert thinks that considering the physiognomic aspects of humans and animals is a part of natural philosophy (c). In summarizing the principles of his physiognomy, Michal Scot argues that in forming judgments about a person one should pay attention to the general impression and combine the testimony of most important signs (d). Albert the Great writes in his *Quaestiones super De animalibus*: 'One can know by the parts of the body to which kinds of habits people are naturally disposed, although one cannot know which kinds of habits they shall adopt and follow' (I.21 (95.41–44)). The discussion of the nature of physiognomic judgements and the need to evaluate several signs was continued in late medieval authors, such as Buridan (e); quotations from Buridan's unedited treatise on physiognomy are found in Ziegler 2007, together with other examples of late medieval considerations of physiognomic knowledge. For medieval physiognomy, see S. Swain (ed. 2007), Ziegler 2007, 2008.

2 Early Modern Physiognomy

a. The authors on physiognomy were Hermes Zopyrus, Loxus, Phylemon and Polemon. Pliny, on the other hand, regarded physiognomy as utterly useless and

superstitious. But Aristotle, Galen, Rhazes and other medical authors thought much of physiognomy, and they are followed by Vegetius in his book on military matters. (Agostino Nifo, *Physiognomicorum libri tres* (2vb))

b. For example, somebody looking for the signs of a brave man must bring together all brave animals and investigate which passions belong to all of these and not to any other animal, and which sign is common to all these animals, and then this sign is the sign of that passion, so that whoever has that sign also has that passion and other way round. And then, using this sign, found by investigating such animals, is formed the physiognomic syllogism in the following manner: Whoever has big extremities is brave; Socrates has big extremities; therefore Socrates is brave. (Agostino Nifo, *Physiognomicorum libri tres* (4vb))

c. In those antecedent acts no moral goodness or badness can be found, for they precede the intellect. Augustine said of these: first movements are not within our control. But the appetite does control certain visible operations, and these involve moral goodness and badness. Whether a practitioner of physiognomy or chiromancy can assess the goodness or badness of all such operations equally easily is something to be considered. And first, regarding the higher operations, it must be said that the operations of reason and will cannot be assessed certainly ... but it must be said that the sensitive appetite follows the condition of the body. For the imaginative soul follows the temperament of the body. (Alessandro Achillini, *De chyromantiae principiis et physionomiae* (10ra))

d. Every physician should know that all powers which are in natural things can be known through the signs. It follows from this that the physiognomy and chiromancy of natural things should be understood to the highest degree by every physician ... Nothing is without a sign, that is, nature does not let anything proceed from it without marking it with a sign of what it entails ... Nothing is so secret in a human being that it does not have an outward sign. (Paracelsus, *Von den natürlichen Dingen*, in *Sämtliche Werke* I, 2 (86–87))

e. For there are mystically in our faces certain Characters which carry in them the motto of our souls, wherein he that can read A. B. C. may read our natures. I hold moreover that there is a Phytognomy, or Physiognomy, not only of Men, but of Plants and Vegetable; and in every one of them, some outward figures which hang as signs or bushes of their inward forms. The Finger of God hath left an Inscription upon all His works, not graphical or composed of Letters, but of their several forms, constitutions, parts, and operations, which, aptly joined together do make one word that doth express their natures. By these letters God calls the Stars by their names; and by this Alphabet *Adam* assigned to every creature a name peculiar to its Nature. Now there are, besides these Characters in our Faces, certain mystical figures in our Hands ... *Aristotle* I confess, in his acute and singular Book of Physiognomy, hath made no mention of Chiromancy; yet I believe that the *Egyptians*, who were nearer addicted to those abstruse and mystical sciences, had a knowledge therein. (Thomas Browne, *Religio Medici*, second part, 137–138)

f. We can easily see that we can confidently judge the inclinations of the soul from proper and permanent signs which are found in countenance, in the appearance of the face, in gestures, and in the body. Among the signs proposed by Aristotle the countenance and the appearance of the face are the most important. (Cureau de la Chambre, *L'Art de connoistre les hommes* II.2 (303–304))

g. It is expressed by the forehead wrinkled, the eye-brow drawn down and frowning, the eye sparkling, and the eye-ball hid under the lids, turning towards the object which causes the passion regarding it cross and sideways, contrary to the situation of the face, the eye-ball should appear unsteady and fiery, as also the white of the eyes and the eye-lids; the nostrils pale, open, and more marked than ordinary, and drawn back, which makes wrinkles in the cheeks; the mouth may be shut ... (Le Brun, *The Conference ... upon Expression, General and Particular*, trans. John Smith 1701)

In his commentary of Pseudo-Aristotelian *Physiognomy*, Nifo mentions ancient physiognomics and the link between physiognomy and medicine which was particularly stressed by Rhazes (**a**). He also refers to Vegetius's *De re militari* from the Later Roman Empire as an example of the usefulness of physiognomic criteria in choosing soldiers. Nifo presents various physiognomic features in detailed lists which are organized into physiognomic syllogisms (**b**). Achillini argues that physiognomy and chiromancy are respectable sciences which evaluate the psychosomatic inclinations of people (**c**). He repeats this in his preface to Cocles's popular treatise in which physiognomy is associated with chiromancy and astrology. Like Marsilio Ficino and various occultists, Paracelsus was also interested in the sympathy between things and the signatures in minerals, herbs, animals, or astral constellations which reveal the occult powers of nature in the same way as human physiognomy reveals inner dispositions (**d**). In mystical philosophy of nature, physiognomy was associated with astronomy and chiromancy. A later example of this tradition is the mid-seventeenth-century English physician Thomas Browne (**e**). Browne also referred to the influential *De humana physiognomonia* (1586) of Giambattista Della Porta. Cureau de la Chambre was particularly interested in the physiognomy of the face (**f**), as was Charles Le Brun, who concentrated on the facial expressions of various passions and moods (**g**). Lavater's physiognomy continued this tradition in the eighteenth century. For early modern physiognomy, see Porter 2005; Maclean 2011.

Part XIV
Psychology of Gender

Chapter 40

Psychology of Gender

Martina Reuter, Malin Grahn, and Ilse Paakkinen

Throughout the history of philosophy authors have used claims about women's deficient psychological capacities in order to justify their inferior position in society. Likewise, male and female defenders of women have most often based their arguments on claims about psychological equality, if not similarity, between the sexes. This chapter traces the major developments and shifts in philosophical discussions about gendered aspects of the soul from Antiquity until the Enlightenment.

Plato divided the soul into three parts – the rational, the spirited and the desiring – which he placed in a hierarchical relation to each other. In the *Republic*, he famously draws an analogy between the soul and society, suggesting that similar hierarchy should prevail between the three different parts of society. In this context Plato defends the much-discussed view that those women, who have the inborn capacity to rule, should be included in the ruling class of society. The interlocutors of the *Republic* explicitly defend a view that the differences between men and women (such as men beget and women give birth) are not relevant for the nature of the person, and thus do not determine the capacities of one's soul or which part of society one naturally belongs to. In *Metaphysics* and *Generation of Animals*, Aristotle, too, claims that the male and the female have the same soul and the same form or species (*eidōs*). Yet in his biological works, he points to several differences in the respective visible or physical form (*morphē*) of males and females. However,

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even if Aristotle here argues that females are naturally passive whereas males are naturally active, he does not draw the conclusion that the souls of males and females have different capacities. Thus, when Aristotle presents his famous claim in the *Politics* that the deliberative part of women's souls is without authority, this claim is not directly based on any particular argument in his biological or metaphysical works (1).

Unlike Plato and Aristotle, the Stoics did not conceive of the soul as being divided into parts. They defended a view of a uniform soul which is thoroughly rational, even though people mostly do not use their rational capacities correctly and are therefore guilty of both epistemic and moral misjudgements. The Stoics also claimed that all humans have similar souls: there was no difference between the soul of a man or a woman, or a slave or a free man. This view, expressed throughout the Stoic metaphysics, is at the background of Musonius Rufus' proposals that also girls should be educated, and that also women should practice philosophy. His proposal is closely connected to the therapeutic function of Stoic philosophy: the explicit aim of philosophy was to help people to strive for peace of mind (*ataraxia*) and happiness (*eudaimonia*). This goal is common both to men and women. Seneca does also refer to the therapeutic function of Stoicism in his letter to the Roman lady Marcia. Roman Stoicism emphasised the capacity to make free choices as the basis for a virtuous and happy life. Seneca points out that Marcia is in this sense as free as any man (2).

The question of whether and to what extent women are created in the image of God had significant importance for discussions of their rational capacity in Christian philosophy, ranging from the Church fathers to Enlightenment thinkers. It was generally held that both women and men are the image of God on account of their genderless rational souls. Augustine of Hippo (3) and Christine de Pizan (5) accepted this view without qualifications, whereas Thomas Aquinas (4) argued that, while women are fully the image of God when we consider only the genderless rational soul, when we consider their sex women are not the image of God. The importance attributed to the sexed body differed depending on which philosophical tradition the author was leaning on. While Augustine and Christine followed Platonism, where the body is separate from the soul, Aquinas and Albert the Great followed Aristotelianism and, contrary to Aristotle himself, claimed that a woman's physiological passivity had a direct effect on her mental capacities. The question of women's education and ability to learn was also discussed. While Aquinas held that emotional and weak women need to be under the rational guidance of men, Christine affirmed that the rational capability to learn is not gendered, but that the brightness or dullness of a person is reducible to individual differences in the minds of women and men.

Renaissance authors from Christine onwards claimed that the delicacy of the female body and mind was in fact an advantage rather than weakness. During the sixteenth-century *Querelle des femmes*, several authors argued that women are superior to men (6). While Henricus Cornelius Agrippa held on to the creational doctrine that the souls of men and women are equal since they are created in the image of God, he claimed that when we consider the sexed body, women are

superior. He inverted the Thomistic claim that sex made a woman inferior. In an exquisite treatise drawing on the Italian school of Renaissance Platonism, Lucrezia Marinella makes the even more radical claim that women are superior also by their souls. She argues that belonging to the same species does not indicate that all souls have to be equal by birth and that since the body is formed in accordance with the soul, women's more beautiful bodies testify to the fact that also their souls are more perfect than the souls of men.

Second scholasticism inspired some early seventeenth-century authors to use an explicitly Aristotelian terminology and method in order to defend the intellectual equality of women. Marie le Jars de Gournay based her argument for the equality between men and women directly on the Aristotelian doctrine of species and Anna Maria van Schurman developed a detailed syllogistic argument for the suitability of educating women (7). During the second half of the seventeenth century, discussions of the soul and its relation to gender became strongly influenced by Cartesian philosophy. Many female and some male thinkers on both sides of the English Channel used Descartes's concept of egalitarian reason in order to argue that the mind has no sex and that men and women are therefore equally capable of learning and virtue. Descartes's concept of reasoning emphasised the freedom of judgement and his claim about the equality of this capacity resembles the Stoic idea that men and women have an equal freedom of choice. The main difference between Descartes and the Stoics is that he strengthened the distinction between the intellect and the will and attributed freedom exclusively to the will. Descartes is thus able to argue that even though people may differ in learning and intellectual capacity, they are equally able to judge correctly since the will is always equally free to assent only to what is clearly and distinctly perceived.

The Enlightenment gave rise to a new polarisation of gender difference, with an increasing emphasis on the complementary psychological capacities of men and women. While some authors, such as Claude Adrien Helvétius, Catharine Macaulay and Mary Wollstonecraft, continued to develop arguments for equality based on the psychological similarity between the sexes, others, like Jean-Jacques Rousseau and Pierre Roussel, developed models for the relations between the sexes based on new assumptions of complementary sexual natures (8). Rousseau and his Scottish contemporaries David Hume and Adam Smith attributed women's greater sensibility to historical, commercial and moral, rather than physiological reasons. It was Roussel who, together with other French physicists and materialist philosophers, such as Denis Diderot, established the idea that the psychologies of men and women are firmly rooted in a physiological and anatomical difference. Towards the end of the Eighteenth century, Wollstonecraft penned a fierce critique of Rousseau and defence of the equal rights and education of women. It is interesting to note that she is still, at this point in history, grounding her argument about equal mental capacity in the claim that women and men are both created in the image of God.

The comments to sections 1 and 2 are written by Malin Grahn, the comments to sections 3, 4 and 5 by Ilse Paakkinen, and the comments to sections 6, 7 and 8 by Martina Reuter.

1 Plato, Aristotle, and Xenophon

a. - We meant, for example, that a man and a woman whose souls are suited to a physician's art have the same nature. Do you not think so?

- I do.

- But that a man physician and a man carpenter have different natures?

- Certainly, I suppose.

- Similarly, then, if it appears that the class of men or that of women have distinct qualifications for any arts or pursuits, we shall say that they must be assigned to them accordingly. But if it appears that they differ in this alone that the female bears and the male breeds, we shall say that it has not yet been proved that the woman differs from the man with respect to what we are talking about, but we shall continue to think that our guardians and their women must practice the same things. (Plato, *The Republic* V, 454d–e)

b. - Then there is no practice of the administrators of a state which belongs to a woman because she is a woman or to a man because he is a man, but the natures are scattered alike among both creatures, and women naturally share in all practices and men in all – yet for all the woman is weaker than the man.

- Certainly.

- Shall we, then, assign all of them to men and nothing to women?

- How could we?

- We shall rather, I take it, say that one woman has the nature of a physician and another not, and one is by nature musical, and another unmusical?

- Surely.

- Is not one woman fitted for physical training and warlike and another unwarlike and averse to training?

- Certainly.

- And again, one loves wisdom and another hates it? And one is spirited, and the other lacks spirit?

- That also is true.

- Then some women are suited to be guardians and others are not. Was it not a nature of this kind that we chose for men who were suited to be guardians?

- It was.

- The woman and the man, then, have the same nature in respect to the guardianship of the state, except that the one is weaker and the other is stronger.

- Apparently.

- Women of this kind, then, must be selected to live with men of this kind and to serve with them as guardians since they are capable and akin by nature to men.

- By all means.

- And must we not assign to the same natures the same pursuits?

- The same.

- So we come back to our previous statement and grant that it is not counter to nature to assign music and gymnastics to the women of the guardians. (Plato, *The Republic* V, 455d–456b)

c. Socrates: Do you think that there is one health for a man and another for a woman, or that health is of the same form everywhere, whether in a man or in anyone else?

Meno: I think that health is the same in a man and in a woman.

Socrates: Then is it not so with size and strength too? If a woman is strong, she will be strong by reason of the same form and the same strength; by 'the same' I mean that strength does not differ as strength, whether it is in a man or in a woman. Or do you think that it makes a difference?

Meno: I do not.

Socrates: And will virtue, as virtue, differ whether it is in a child or in an elderly person, in a woman or in a man?

Meno: I think that this somehow is not quite the same as the others.

Socrates: Why? Were you not saying that for a man, virtue was to manage a state well, and a woman, to manage a house well?

Meno: I was.

Socrates: And is it possible to manage a state or a house or anything else well, if it is not done temperately and justly?

Meno: Surely not.

Socrates: And to manage justly and temperately will mean to manage with temperance and justice?

Meno: It must be so.

Socrates: Then both the woman and the man require the same things if they are to be good, namely justice and temperance.

Meno: They obviously do. (Plato, *Meno* 72d–73c)

d. According to the probable account, of all those who were generated as men, those who were cowards and spent their lives in wrong-doing were changed into women in their second generation. For this reason the gods at that time devised the love of sexual intercourse by constructing an animate creature of one kind in us, and of another kind in women and they made these as follows ... Wherefore in men the nature of the genital organs became unruly and imperious, like an animal which is disobedient to reason, and it attempts to dominate all because of the sting of lusts. And in women, for the same reasons, whenever the so-called matrix or womb, which is an indwelling animal desirous of procreating children, remains without fruit long beyond its proper time, it becomes distressed and disturbed; and by wandering in every direction through the body and blocking up the passages of the breath and obstructing respiration, it brings them into extreme anguish and causes all kinds of disease, until the desire and love of both sexes unite them. (Plato, *Timaios* 90e–91c)

e. But there are by nature various kinds of rulers and ruled, for the free man rules over the slave, the male over the female, and the man over the child in a different way. Now, all possess parts of the soul, but they possess them in different ways. For the slave has no deliberative part at all; the woman has it, but it is without authority, and the child has it, but it is immature. We must suppose the same with the virtues of character as well: all must partake of them, not in the same way but in such measure as is required by their own function. Hence the ruler must have complete virtue

(for any work, without qualification, demands a master-craftsman, and reason is a master-craftsman); while each of the other parts must have that share of it which is appropriate to them. Thus it is clear that the virtues of character belong to all of them, and that the temperance of a woman and a man are not the same, nor their courage and justice, as Socrates thought, but the one is the courage in commanding and the other in obeying, and the same holds true of other virtues. (Aristotle, *Politics* I.13, 1260a8–24)

f. For he made the man's body and soul more capable of enduring cold and heat, and travel and expeditions, and therefore ordained for him the outdoor tasks. And God seems to me to have assigned the indoor tasks to women, since he made her body less capable in these respects ... And knowing that he had ordained for the woman the nurture of new-born infants, he apportioned to her a greater facility to love new-born infants than to the man. And because he had imposed on the woman the protection of the stores also, knowing that for protection a fearful disposition is no disadvantage, God gave to the woman a greater share of fear than to the man; and knowing that he who deals with the outdoor tasks will have to provide protection against wrong-doers, he gave to him a greater share of courage. But because both must give and receive, he shared memory and awareness between them both, and so you could not say whether the male or the female sex has more of these. He also shared between them the power to practice self-control, where needed, and allowed whichever proved to be better in this respect, whether the man or the woman, to win a larger portion of the good which comes from it. And insofar as both sexes have different natural qualities, they have more need of one another, and their pairing is beneficial to each, the one having what the other lacks. (Xenophon, *Oeconomicus* VII.23–28)

Plato presents the famous argument that in the ideal republic, both men and women can become rulers, because the capacity to rule is inborn, embedded in the person's nature, and purely a capacity of the soul, not of the body (a). He further explicitly claims that this capacity can occur in women as well as in men. However, somewhat strangely when arguing for this point, Socrates and his interlocutors claim that women are weaker than men (b). It remains ambiguous in this context whether the interlocutors mean to say that she is physically weaker, or whether this alleged weakness also affects her soul's capacities, such as rationality. The latter reading seems implausible, because it would rather speak against taking women to the guardian class in the first place. In the dialogue *Meno* Socrates questions the character Meno on his conception of virtue. Meno first tries to define virtue by appealing to different instances of virtue and lists the virtue of a woman, a man etc. Led by Socrates' questions, Meno has to admit that similarly as health is not a relative concept in that its significance does not vary from man to woman, the same applies to virtue (c). The interlocutors thus come to the conclusion that it would be absurd to claim that virtue would be relative to the subject. Virtue is uniform,

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i.e. the same for all, and as virtue for Plato exclusively concerns the soul, the argument presumes that men and women alike have all the necessary soul capacities for achieving virtue. In the dialogue *Timaeus*, Plato offers a causal explanation for sexual dimorphism: vicious men are punished for their bad characters by being reborn in the second reincarnation as women (d). An even worse destiny would be to be reborn as an animal ‘which has a nature corresponding to that vice the person was guilty of’ (*Timaios* 42b–c). Thus the argument assumes that the souls of women are degenerated forms of the virtuous souls (of men). The latter part of the argument concerns sexual dimorphism in connection with sexual desire and generation, and suggests that both a woman’s physical and mental illness can be caused by the womb that has not become pregnant, a conception that was common in ancient thought and that would continue to be influential into modern times.

Aristotle denies the position defended by Socrates in Plato’s *Meno* and argues that virtue is not the same for men and women (e). Even if Aristotle admits that women (as well as slaves) can and should have virtues, unlike men they are not independent and autonomous moral agents. Marguerite Deslauriers has argued that according to Aristotle women have to ‘borrow *phronēsis*’ from free men ‘in order to develop moral virtues of obedience’ (Deslauriers 2003, 229). It is remarkable, however, that the claim that the deliberative part (which is needed for the full functioning of virtue) is ‘without authority’ (*akyron*) in women is not derived from any particular argument in Aristotle’s metaphysics or biology. In his biological works, he points to several differences in the respective *morphē* (visible or physical form) of males and females (*De generatione animalium* I.19, 727a25; *Historia animalium* IV.11, 538b1–15). He argues that females are naturally passive whereas males are naturally active (*De generatione animalium* I.20, 729a25–30) and that females give matter in procreation whereas males give the form (II.4, 738b20). But even here he explicitly asserts that male and female have the same soul (II.5, 741a8). In *Metaphysics* X. 9, 1058a30–b25, Aristotle wonders why male and female (or man and woman) are of the same species, even if masculinity and femininity are contrary concepts. He explains that ‘being a male’ or ‘being a female’ is a characteristic that belongs to the animal *qua* animal, but not because of their substance, but because of their bodies and the matter they consist of. Thus, here it seems that Aristotle understands that being a female or a male seems to be an accidental, instead of an essential, characteristic. However, for Aristotle biology and politics are two independent fields of research, and one is not based on the other. In *Politics*, Aristotle discusses virtues importantly as social, and thus the different political roles of men and women in the *polis* seem to offer a motivation for why Aristotle discusses their respective virtues as different, too.

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Xenophon gives both a causal and a teleological explanation for sexual dimorphism: he both refers to the creation of God, and to the *telos* of having two different types of bodies to correspond with the two different types of work: the works in the private and the public sphere of life (f). Xenophon thus argues that women's and men's bodies and their respective, predetermined social roles are both separate, but complementary, and as such they are also equally valuable. In addition to pointing out differences between men and women, he also argues for essential similarities: certain central virtues such as self-control are common for both.

2 Stoicism

a. When someone asked him whether women also should study philosophy, he began to teach how they should as follows. Women, he said, have received from the gods the same reason as men, which we employ with each other and by which we discern in regard to each thing whether it is good or bad, honourable or shameful. Likewise the female has also the same senses as the male: sight, hearing, smell, and the rest. Likewise, too, each has the same parts of the body, and one has not more than the other. In addition, a desire for virtue and capacity for acquiring it belong by nature not only to men but also to women: and they are disposed by nature no less than men to accept good and just deeds and to reject their opposites. (Musonius Rufus in Stobaeus II.31.126)

b. Above all, we must examine the doctrine which we think the women who study philosophy ought to follow. Could the doctrine which presents modesty as the greatest good make them bold? Could the doctrine which guides to the greatest self-restraint teach them to live heedlessly? Could the doctrine that intemperance is the greatest evil not teach them self-control? And could the doctrine which presents the management of a household as a virtue not lead them to manage their households? (Musonius Rufus in Stobaeus II.31.126)

c. But who has said that nature has dealt badly with the spirits of women and has narrowly restricted their virtues? Believe me, they have the same force, the same capacity for virtue, if they choose it; they are just as able to endure suffering and toil when they are accustomed to it. (Seneca, *Ad Marciam* 16.1)

Even if the Roman Stoic Musonius Rufus' argument is intended to persuade (upper class) Roman fathers rather than philosophers, the argument is based on genuinely Stoic elements. Musonius appeals to several central Stoic philosophical concepts in his defense of women's education (**a**). He mentions

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reason, *logos*, which, according to the Stoics, governs the entire cosmos and is a distinctively human characteristic. Human souls differ from animals by being part of universal reason. Musonius also refers to the famous Stoic notion of *oikeiōsis*. In short, the term expresses the Stoic idea that a human will naturally know what way of life is most appropriate for her, and that sociability between humans is a naturally good thing that is, thus, naturally good for a person to choose. In this passage, Musonius also suggests that the life of virtue is a part of *oikeiōsis*, and men and women are equally guided by and capable of this. In the background of Musonius' view we can distinguish the early Stoic notion of the soul as divided into eight basic faculties: ruling faculty (*hēgemonikon*), the five senses, speaking capacity and capacity of reproduction (*sperma*) (Aëtius IV.21.1–4; LS 53H). Both men and women have all these capacities, including the last-mentioned capacity of reproduction (which in Stoicism interestingly is counted among the rational faculties), even if it occurs in them in two different (physical) forms.

Musonius' argument presumes that all rational capacities are similar in men and women since, as for Socrates in *Meno*, for the Stoics also virtue by definition requires well-functioning rationality. In **b** Musonius draws the consequence which follows from the premises explicated in **a**: since women and men are equally capable of rationality, they are also equally capable of achieving happiness (*eudaimonia*). As was common in Ancient philosophies, the Stoics set happiness as the highest goal of their philosophical activity. By claiming that women can achieve the very highest form of human life, the Stoics take a different position than Aristotle. Aristotle claims that the deliberative part of a woman's soul is without authority (**1e**) whereas Musonius claims that Stoicism 'encourages a woman to be happy and to rely on herself'.

Seneca's letter to the Roman lady Marcia is one of the few surviving Ancient philosophical texts expressly directed to a woman. The letter belongs to the genre of philosophical consolation letters: Seneca aims at helping Marcia to overcome her grief caused by the death of her son. For this purpose, Seneca uses the method of philosophical argumentation, and a part of his argument consists of convincing Marcia that being a female does not affect her capacities for virtue (**c**). But he adds that also women have to choose to exercise their virtues. Especially the Roman Stoics who, even more clearly than earlier Stoics, understood philosophy as a therapeutic practice, generally emphasised the importance of freedom in our strife for happiness and peace of mind. To become happy, one must distinguish between the things which are within one's own power and those which are not. Seneca here encourages Marcia to exercise her capacity to make a free choice, and attempts to help her in her grief by a method of genuinely Stoic philosophical therapy. For discussions of the psychology of gender in ancient philosophy, see Freeland (ed., 1998), Alanen and Witt (eds., 2004), Grahn 2013.

3 Augustine

a. No one doubts that human being was made in the image of Him who created this being, not according to the body, nor according to any part of the soul, but according to the rational mind, wherein the knowledge of God can exist. The image of God does not remain except in that part of the soul in which it clings to the eternal reasons which it may contemplate and consider ... and this, it is clear, not men only, but also women have. (Augustine, *De trinitate* XII.7.12)

b. [I]n the original creation of human being, inasmuch as woman was also a human being, she certainly had a mind, which was a rational mind, and therefore she also was made in the image of God. But because of the uniting bond [Scripture] says merely, *God made human beings in the image of God*. And, lest anyone think that this refers only to the creation of human spirit, although it was only according to the spirit that a human being was made in the image of God, [Scripture] adds, *Male and female He made them*, to indicate that the body also was now made. (Augustine, *De genesi ad litteram* III.22.34)

c. And as in his soul there is one power which rules by directing and another made subject that it might obey, so also a woman was corporeally made for the man. In her mind she had an equal nature of rational understanding, but in the sex of her body she was subjected to the masculine sex, as the appetite of action is subjected by reason of the mind to conceive the skill of acting rightly. (Augustine, *Confessiones* XIII. 32.47)

d. And as the two have one flesh in the case of man and woman, so in the mind one nature comprehends our intellect and action, or our counsel and operation, or our reason and rational appetite, or whatever other more significant expressions may be used of these. As it was said of the former, 'And they shall be two in one flesh,' it may be said of these, that they are two in one mind. (Augustine, *De trinitate* XII.3.3)

Augustine claimed that human beings are images of God on account of the rational part of the soul, which is genderless (**a**, **b**). Augustine remarks that if anyone thinks that women are not created in God's image, they make a mistake in connecting the image of God to the limitedness and impermanence of the bodily condition (**b**). As God is not a body, also the part, according to which humans are the image of God, is not of bodily origin. Augustine's conception of the constitution of human beings is hierarchical; at the lower level is the corporeal body, the active reason is higher, while the highest part of the mind is the contemplative reason, which makes both genders the image of God. Augustine draws an analogy according to which the husband is comparable to contemplative reason, while the wife is comparable to active

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reason (**c, d**). Women are naturally subject to men in the same way as active reason is subject to the guidance of contemplative reason. However, individual men and women possess both parts of the soul, see also *De trinitate* XII.10; 12.19. Men have natural authority over women because of the order of creation and women's role as helpmates to men (see also *De trinitate* XII.10 and *De genesi ad litteram* IX.5.9). When Augustine discusses the role of women, he concludes: 'Truly, how much more agreeably would two male friends live and converse together, than a man would live with a woman' (*De genesi ad litteram* IX.5.9). Thus it seems that even though Augustine argues for the similar rational capacities and genderlessness of the souls of women and men, there is something either missing or different in women, which makes them best suited for copulation and childrearing, rather than as equal intellectual companions to men.

Augustine tries to reconcile the incompatibility of Genesis (1:27) according to which woman is the image of God and Paul's letter to Corinthians (11:7–9) according to which women must cover their heads because they are not made in the image of God (**d**). He solves the problem by interpreting Genesis literally and Corinthians allegorically (*De trinitate* XII.12.19). When Paul states that women should cover their heads because they are not the image of God, he refers allegorically, Augustine claims, to active reason, which is represented by women and must be controlled by contemplative reason, represented by men. In the rational wedlock of the twofold mind the contemplative rules the active, in a similar fashion to the husband who rules over his wife. Both modern and medieval interpreters of Augustine have often ignored the fact that Augustine is speaking allegorically here. From the allegory – where women represent the active aspect of the human mind, which is the help-mate of the contemplative aspect – it does not follow that women themselves are deprived of the status of being made in the image of God, nor does it follow that the minds of women are predominated by the active aspect, while men alone possess the contemplative aspect. On the contrary, by emphasising that the passage in Corinthians is not to be taken literally, Augustine argues that women are images of God as fully as men. In this way Augustine manages to affirm that women share in the full participation in human cognitive skills together with men. For an example of a literal interpretation, see Allen 1985, 222.

4 High Scholasticism

a. [B]ecause of the coldness of the composition of a woman, the sensory powers are weakened because touch is weak, and consequently her intellect is weaker. (Albert the Great, *Quaestiones super De animalibus* XV.11, ad 1 (266a))

b. A woman is deficient in intellectual activities, which consist in the apprehension of good, the knowledge of truth, and the avoidance of evil; and therefore she attends more to the sensitive appetite which tends towards evil, unless ruled by reason, as apparent in [Aristotle's] *Ethics* VII. Therefore the senses move woman to every evil, just as intellect moves man to every good. (Albert the Great, *Quaestiones super De animalibus* XV.11, ad 2 (266a))

c. True love and desire is greater in a man and, therefore, there is truer pleasure in him, but the apparent desire and love is greater in a woman because of the weakness of her judgement. For just as matter desires to be under every form, and while existing under a noble form it desires to exist under a vile one, so it is with a woman, who desires to exist under the one she does not have; because of the weakness of her reason, she judges that what she does not have is better than what she has. Therefore she desires intercourse more often than a man, because when she is not in intercourse she desires to be joined in intercourse because of the corruption of judgement, etc. (Albert the Great, *Quaestiones super De animalibus* V.4, ad 2 (156a))

d. The image of God, in the principal sense of the image, namely the intellectual nature, is found both in man and in woman ... But in a secondary sense the image of God is found in man, in a way in which it is not found in woman: for man is the principle and end of woman as God is the principle and end of the whole creature. So when the Apostle said that man is the image and glory of God, but woman is the glory of man, he explained why he said this, by adding: 'For man is not of woman, but woman of man; and man was not created for woman, but woman for man.' (Thomas Aquinas, *Summa theologiae* I.93.4, ad 1)

e. He [Aristotle] gives the example of women in whom, for the most part, reason flourishes but little because of the imperfection of corporal nature. Because of this they do not govern their emotions by reason but rather are mostly led by their emotions. For this reason wise and brave women are rarely found, and so they cannot be called continent and incontinent without qualification. The same argument seems to apply to those who are sickly; that is to say, those who have a diseased disposition because of bad habits, which oppresses the judgement of reason after the manner of a perverse nature. (Thomas Aquinas, *Sententia libri Ethicorum* VII.5, n. 9)

f. It seems to be against fairness if the society just mentioned [matrimony] is dissolved, for the female needs the male, not merely for the sake of procreation, as in the case of other animals, but also for the sake of governance, since the male is both more perfect in reasoning and stronger in powers. (Thomas Aquinas, *Summa contra Gentiles* III.123)

Albert the Great applies claims from the realm of natural philosophy, most significantly claims about generation, in order to explain the claimed psychological and moral inferiority of women. Albert's *Quaestiones super libris De animalibus* was written down by his student Conrad of Austria based on his

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lectures in Cologne in the year 1258. Albert leans on the authority of Aristotle (*De generatione animalium*), Galen (*De semine*) and Avicenna (*De animalibus*, *Canon medicinae*) often in ways which are unfaithful to his sources. Albert uses the theory of elements to explain both the physical and the psychological weakness of women. The cold and moist constitution of women causes them to be easily moved and unable to retain firmness (**a**), which causes women to have a weak intellect. Besides physically and mentally inferior, women are also evil. The evilness of women is caused by their inferior mind, which retain firmness weakly. This causes women to follow their passions, which inclines them to pursue vice instead of virtue (**b**). Albert adds demonising depictions to Aristotle's short comment on the passivity of women in copulation (*Nicomachean Ethics* VII.5, 1148b32–33). According to Albert, the mental inferiority of women causes in them the eagerness to have intercourse with men. The quantitative pleasure is greater in women, while the intensive pleasure is greater in men. This is because desire and love is 'truer' in men and results in 'truer' pleasure. Apparent appetite and love in woman is greater because of the weakness of her judgement. Women seek quantity over quality, because their weak reason is constantly seeking something new, which they do not have (**c**).

Thomas Aquinas rejected his teacher Albert's view on the evil and lustful nature of women. Aquinas claims that an individual can be the image of God in two ways; principally, by her intellectual nature, which does not recognise gender and secondarily, according to the distinction of sex, where only men are the image of God (**d**). When discussing the secondary sense – whereby women are not the image of God – Aquinas invokes the creational hierarchy which ranks men as superior to women. Accordingly, women were made for and from men, which makes their status naturally subordinate to men (*Summa theologiae* I.92.1–2). As God is not subordinate to anything, women cannot, in the secondary sense of their sex, be the image of God. Like Augustine, Aquinas had difficulty reconciling the conflict between Genesis (1:27) and Corinthians (11:7–9). Unlike Augustine, Aquinas did not interpret Corinthians allegorically, but literally. Aquinas's interpretation is rather contradictory: if humans are the image of God only in their rational souls, it is impossible to have a secondary category based on the distinction of sex. Aquinas's statement (**d**) is incompatible with his claim that 'the image of God belongs to both sexes, since it is in the mind, wherein there is no sexual distinction of sex' (*Summa theologiae* I.93.6, ad 2).

Like Albert, Aquinas elaborates on Aristotle's remark on women's inability to govern their passions, though he omits Albert's conclusion about the evil nature of women. Unlike Aristotle, Aquinas explains that the weak reason of women results from their 'imperfect corporeal nature'

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(e). He likens women to people who have a diseased temperament, which oppresses their reason. Because women have an imperfect bodily constitution, their sensory system is inhibited and thus cannot provide adequate phantasms for the rational soul (the body provides information for the sensitive soul through phantasms; see *Summa theologiae* I.89.1–2 and Pasnau 2002b, 373–374). Consequently, women’s imperfect corporeal nature prevents the proper functioning of their rational soul. Aquinas’s reasoning can be analogically compared to two students of philosophy, both equally intelligent, but one of them short-sighted. Even though there is no flaw in the rationality of the short-sighted student, she will not be able to master the subtleties of philosophy without outside help. Because the sensory flaws impede the rational capacities of women, they are inclined to be governed by their emotions, rather than by their reason. For the relation between the body and the soul in Aquinas, see Pasnau 2002a, and Kretzmann 1993.

The servile and economic subjection of women is explained by women’s weakened capacity to use their rational powers. Just as the short-sighted student needs glasses, women need to be under the guidance of men, who are perfected in wisdom (compare with Aquinas’s reasons why women cannot teach publicly, at *Summa theologiae* II-2.177.2). Aquinas justifies lifelong marriage with a similar argument. Whereas generative reasons do not explain the necessity of lifelong companionship, the need of women to be under the guidance of men equipped with superior powers of reasoning does (f). According to Aquinas it would be inequitable for a husband to forsake his wife, whereas it would be against natural order for a wife to forsake her husband (*Summa contra Gentiles* III.123.3–4).

The pseudo-Thomistic treatises confused the Thomistic conception of female psychology. For example, Ptolemy of Lucca’s (1236–1327) *De regimine principum* has been attributed to Aquinas; see Allen 2002, 142. Lucca connects the physiology of women to their mental inferiority when he maintains that ‘Aristotle tells us that a woman is a stunted male, so that just as women are deficient in their constitution, so are they also in reason; thus because of their deficient heat and constitution, women are timid and fearful of death what should be definitely avoided in wars’; see *De regimine principum* IV.5. Pseudo-Thomistic treatises such as this worsen the reputation of Aquinas’s conception of women.

5 Early Renaissance Debates

a. A woman was never so stable that she might not be unpredictable and changeable. So she remains a very irritable beast. Solomon says that no head was as cruel as the head of a serpent, and nothing more irritable than a woman. And, he says that nothing has as much malice. Briefly, in a woman there is so much vice that no one

can describe her perverse behaviour in rhyme or verse. (Jean de Meun, *Le Roman de la rose*, 16327–16336 (143))

b. But some men are foolish enough to think, when they hear that God made man in His image, that this refers to the material body. This was not the case, for God had not yet taken a human body. The soul is meant, the intellectual spirit that lasts eternally just like the Deity. God created the soul and placed equally good, noble and wholly similar souls in the feminine and in the masculine bodies. (Christine de Pizan, *Le livre de la cité des dames* 27a (651–652))

c. All the same, there is no doubt that Nature made them as good in body and understanding as the wisest and learned men in cities and towns. All of this stems from their lack of education, though, just as I told you, among men and women some have better understanding than others. (Christine de Pizan, *Le livre de la cité des dames* 82a (722))

d. I realise that all things which are feasible and knowable, whether requiring physical strength or the wisdom of understanding or any virtue, are possible and easy for women to accomplish. (Christine de Pizan, *Le livre de la cité des dames* 152 (816))

e. A large and strong body does not bring about virtuous and powerful courage; but this comes from a natural and virtuous force which is a gift from God, which He allows Nature to imprint in one rational creature more than in another, and [it] is sheltered in the understanding and courage and not at all in bodily force or members ... and it would have been better, for the souls of several of the very strong men, if they had spent their pilgrimage in this world in weak feminine bodies ... if Nature did not give great strength of limb to women's bodies, she has made up for it by giving them a most virtuous inclination, that of loving one's God and of fear of disobeying His commandments. (Christine de Pizan, *Le livre de la cité des dames* 51 (674))

f. [Free Will:] All hear that women were formerly filled with wisdom and with prowess and that they are and were as worthy as men in all noble deeds ... I shall speak as well about their other virtues. In knowledge and education they were of the highest quality and better than men, especially in inventive human arts ... The mind of woman is not merely directed to find necessary arts, but pleasure and delight is gained in perfecting every talent which charm can supplement, inside or outside of the monastery ... Woman gives her mind entirely to any task which she undertakes; were she to gloss the Psalter, it would be the richer and greater one ...

[Slow Wit:] I believe the case with all [women] truly is, he [Slow Wit] repeated, as it was with Christine, whose son Castel wrote her books and verses. (Martin le Franc, *Le champion des dames*, 106, 111, 113, 179)

The negative conceptions about women from authors such as Albert the Great had an impact on the romance literature of the early Renaissance. For example, in Jean de Meun's (1240–1305) chivalric romance, the highly popular *Roman de la rose*, the viciousness of women was seen as a consequence of the

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instability in their minds (**a**). Christine de Pizan (1365–1430) delivered a powerful defence of women’s rationality and virtue. She argues that any shown differences in rational capacity are due to individual variation, not gender (**b**, **d**). The seeming ignorance of some women stems from an insufficient education (**c**, **d**). Christine maintains that ‘[I]f it were customary to send daughters to school like sons, and if they were then taught the natural sciences, they would learn as thoroughly and understand the subtleties of all the arts and sciences as well as sons’, see *Le livre de la cité des dames*, 82 (721).

Christine criticises the claim that the weakness of female bodies causes weakness of mind. She argues that a woman’s physical weakness is in fact her strength (**e**). Her perspective is Platonic: she depicts the body as a prison for the soul in her letter discussing the atrocities of war, *Epistre de la Prison de la Vie Humaine*. Whereas the weak bodies of women allow their minds to be free and contemplate God, the strongness of the male body has a contrary effect, see *Cité des dames* 51–52 (673–675) and compare to *Commentary on the Dream of Scipio* by Macrobius, I.12. 7. She even makes an example out of Aristotle, who she claims was physically deformed, but received a retentive mind as a recompense for his bodily weakness; see *Cité des dames* 51 (674). Thus Christine takes a well-known argument against women – that their weak corporeal nature inhibits their rational capacity – and transforms it for the defence of women. However, Christine did not argue that women’s bodies make them more virtuous than men. The souls of women and men are strictly equal in virtue (**b**); see also *Cité des dames* 27a (652).

While the Platonic tradition focuses on the polarity of the soul and the body, the Thomistic interpretation highlights their union. From this point of view, for a Platonic philosopher, the mundane corporeality of the body prevents the soul from reaching its higher essence. The Thomistic perspective, on the contrary, requires the cooperation of, preferably, a well constituted body, together with the different aspects of the soul. While Christine shared a Platonist conception of the body as a prison, she also emphasised the positive role of the body in active life throughout her literary career. According to Christine, lady Fortune transformed her into a man after the death of her husband, see *Le Livre de la Mutacion de Fortune*, 1327–1328 (51). The transformation required the reorganising of the humoural balance of her body by increasing the fiery element, which changed Christine from timid (feminine inclination) to brave (masculine inclination). Concerning Christine’s ideas about gendered inclinations, see *Cité des dames* 40 (664–665). For virtues and women in medieval and early modern thought, see also Green and Mews (eds., 2011).

As the name of Martin Le Franc’s (1400–1461) treatise, *Le champion des dames*, suggests, the case of women is presented in an allegorical court.

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Le Franc discusses the standard accusations against women and refutes them. The prosecutor, Slow Wit, defames women, while the defence councillor, Free Will, argues for women's equality or even superiority (f). According to Le Franc the minds of women are capable of every task, study and art. Le Franc constructs his argument for women in the same vein as Christine. He refers to an astonishing amount of illustrious women as a premise wherefrom he concludes that women in general are intelligent and virtuous. Le Franc uses Christine as an example of women's capability of learning and the character Slow Wit as an example to point out how women are belittled by some male scholars. Slow Wit insists that Christine's son was the real author of her treatises (f).

6 The Renaissance *Querelle des femmes*

a. God the Most Excellent and Greatest, Father and giver of all good things, who possesses the fecundity of both sexes, created humans in his image, creating them male and female. There is no distinction between these sexes except in the different location of the parts of the body for which procreation necessarily required diversity. But he provided both man and woman with the same form of soul, in which there is no dissimilitude of sex. Woman is given the same intelligence, reason and power of speech as man and she tends to the same end of happiness in which there will be no restriction by sex. (Henricus Cornelius Agrippa, *De nobilitate et praecellentia foeminei sexus* (49))

b. Woman is superior to man because of the material from which she is created, for she was not made from inanimate or vile clay as man was, but from purified, living and animated matter which participates in divine intelligence through the rational soul. (Agrippa, *De nobilitate et praecellentia foeminei sexus* (55))

c. Women, just like men, are composed of two parts. One is the origin and principle of all the noblest operations, and it is called the soul by everyone; the other part is the transient and mortal body, which obeys the commands of the soul like something which is dependent on it. If we consider the first part, that is women's soul, and if we want to speak with philosophers, we will undoubtedly say that men's soul is equally noble to women's soul, because both are of one and the same species, and therefore of the same substance and nature ... For my part, I do not agree with this opinion. I say that it is not impossible that within one and the same species there should be souls which are from their creation nobler and more excellent than others ... (Marinella, *La nobiltà et l'eccellenza delle donne, co' difetti et mancamenti de gli huomini* I.3 (11–12))

d. The fifth and last name is *mulier*, from Latin, which signifies soft and delicate, when we apply it to the body, but gentle and benign, when applied to the soul. Thus in both ways it leads to a praise of women, because soft and delicate flesh suggests that the mind there is more able to understand than one that is within coarse rough flesh. This is taught by Aristotle, who says ‘Soft flesh, able mind’. As regards the soul, what is more praiseworthy than gentleness and mercy? (Marinella, *La nobiltà et l’eccellenza delle donne* I.1 (8))

e. The body of a woman is nobler and more worthy than the body of a man, as is shown by its delicacy, its particular complexion and temperate nature, and its beauty. Beauty is a grace or splendour which results from the soul and the body, because the beauty is without doubt a ray and light of the soul which informs the body in which it finds itself, as the wise Plotinus wrote ... The soul is therefore the cause and origin of the beauty of the body ... (Marinella, *La nobiltà et l’eccellenza delle donne* I.3 (13–14))

Henricus Cornelius Agrippa argues that men and women are identical when it comes to their souls, created in the image of God (**a**), but woman is made superior by her nobler body, which was created from the animated matter of Adam’s body (**b**). Women are thus in a sense doubly animated. Agrippa’s argument is an inversion of the traditional theological argument, defended by Augustine (**3c**) as well as Thomas Aquinas (**4d**), according to which woman is equal to man when considering her rational soul, but inferior when considering her sex. Agrippa argues that a woman’s sex does in fact make her superior. The pre-eminence of the female sex is shown by her greater beauty and by the fact that her sexual parts are more decently placed. Agrippa’s argument that woman is created from a nobler material than man can be found already in Christine’s writings (*Epistre au dieu d’Amours* 592–600), even though she did not draw the conclusion that women are superior to men. There is no clear evidence that Agrippa had read Christine’s work, but her *Le livre de la cite des dames* circulated in manuscript among the learned in France, where Agrippa delivered the lecture that became *De nobilitate et praecellentia foeminei sexus* (1529). It is possible that he was directly familiar with her writings and we do at least know that ideas similar to hers were ‘in the air’ (see Rabil 1996, 19).

Lucrezia Marinella further radicalises Agrippa’s claim about the pre-eminence of women and argues that not even souls have to be considered inherently equal (**c**). It is thus possible that women are born with nobler souls than men. In addition to the ‘philosophers’ of the Aristotelian-Thomistic tradition, Marinella refers to Moderata Fonte’s poem *Tredici canti di Floridoro* (1581) as an example of the claim, with which she disagrees, that women and men are equally noble because they are members of the same species. Marinella’s thought is strongly influenced by the Renaissance Platonism of the

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Italian medical schools (her father was a Venetian medical doctor) and especially by Marsilio Ficino, to whom she repeatedly refers. Her interpretation of the Platonist doctrine of emanation emphasises the positive rather than negative consequences of human embodiment. Marinella argues that since the soul is cause as well as form of the body, we can infer beauty of soul from bodily beauty (e). The body can be seen as an expression of the soul and women's greater bodily beauty does thus testify to the greater nobility of their souls. Like most Renaissance thinkers, Marinella is truly eclectic and her Platonist sympathies do not exclude positive references to Aristotle as well. When Marinella presents the argument that a soft and delicate body indicates ability rather than weakness of soul, she refers to the authority of Aristotle, paraphrasing a passage from *History of Animals* 608a23–25 (d). Marinella's treatise, published in 1600, was written as a response to Guiseppe Passi's *Dei donneschi difetti* (1599), where he claimed that women are evil by nature and ruled by their perverse passions. Marinella's text is in many respects, including in its vivid detail as well as its aim to draw the most extreme possible conclusion, a culmination of the rhetoric of the *querelle des femmes*, which was not to be surpassed. There is no clear evidence that Marinella was familiar with Agrippa's work, but she may have read an anonymous Italian translation published in 1549 and it is likely that she was familiar with Lodovico Domenichi's *La nobiltà delle donne* (1549), which drew heavily on Agrippa; see Panizza 1999, 18–19.

7 The Cartesian Tradition and Its Contemporaries

a. [T]he human animal, when it is understood correctly, is neither man nor woman, the sexes having been made double, not simply but *secundum quid*, to use Scholastic language, for the sake of propagation alone. The unique form and differentiation of that animal consists only in the human soul. (Marie le Jars de Gournay, *Égalité des hommes et des femmes* (49))

b. Let this then be our thesis: the study of letters is suited to a Christian woman. To confirm this, I argue as follows, first from the subject and then from the predicate.

1. *Argument from the proprium of the subject.*

Whoever is provided by nature with the principles or the power of the principles of all arts and sciences is suited to study all arts and sciences. But women are provided by nature with the principles and the power of the principles of all arts and sciences. Therefore the study of all arts and sciences is suited to women.

The *proposition* is proved, because if the principles or powers of principles are suited to someone, the knowledge of the conclusions which are naturally drawn from those principles is also suited to the same. The *assumption* may be proved both from what is a proprium of the form of the subject, that is to say, human reason, and also from the acts or effects themselves, since it is obvious that women in fact learn all kinds of sciences and arts, and indeed no acts can be without principles.

2. *Argument by the proprium of the subject.*

Whoever by nature has a desire for sciences and arts is suited to study sciences and arts. But women by nature have a desire for sciences and arts. Therefore etc. The reason of the *major* premise is obvious since nature makes nothing in vain. The *minor* premise is proved because what belongs to the whole species also belongs to singular individuals. But every human being desires by nature to know, as the Philosopher clearly states in *Metaphysics*, Book I, Chapter 2. (Anna Maria van Schurman, *Dissertatio de ingenii muliebris ad doctrinam et meliores litteras aptitudine* (12–13))

c. Good sense is the best distributed thing in the world: for everyone thinks he is so well provided with it that even those who are most difficult to please in all other things do not usually desire more of it than they have. It is unlikely that everyone is mistaken on this matter. It shows rather that the power to judge well and to distinguish the true from the false – which is what we properly call ‘good sense’ or ‘reason’ – is naturally equal in all men. Hence the diversity of our opinions does not arise because some of us are more reasonable than others but only because we direct our thoughts along different paths and do not consider the same things. For it is not enough to have a good mind; the main thing is to use it well. (Descartes, *Discours de la Méthode*, AT VI, 1–2)

d. Now two things are required for wisdom thus described, namely the perception of the intellect and the inclination of the will. While that which depends on the will is within the capacity of everyone, some people have a much sharper intellect than others. Those who have a somewhat slower intellect can be wise in their way and find favour with God, when they, being ignorant of many things, have a firm and constant will to do everything to acquire knowledge of what is right and to do all what they judge to be right. Nevertheless, those are much more excellent who have the firmest will to act rightly as well as the sharpest mind and the greatest concern for knowing the truth.

That this concern is found in great perfection in your Highness is clear from the fact that neither the diversions of the court nor the accustomed education of young ladies, which often condemns them to ignorance, have been able to prevent you from studying all good arts and sciences; and the outstanding and incomparable sharpness of your intellect is evinced by your deep examination of all the secrets of these sciences. (Descartes, Dedicatory Letter to Elisabeth, *Principia Philosophiae*, AT VIII, 3)

e. Having examined this Opinion [that women are inferior to men] by applying the rule of truth, not to accept anything as true unless it is supported by clear and distinct ideas, it became clear that it is false and founded on prejudice and popular

tradition, and that the two sexes are equal, that is, women are as noble, as perfect and as capable as men. (Poullain de la Barre, *De l'égalité des deux sexes* (10))

f. It is easy to realise that the difference between the sexes pertains only to the body, since properly speaking only this part is used in the reproduction of humankind. Since the mind merely gives its consent and does this in the same way in everyone, one may conclude that it has no sex. (Poullain de la Barre, *De l'égalité des deux sexes* (59))

g. God joins the mind to the body of a woman, like to that of a man and according to the same laws. Sensations, passions, and the will constitute and maintain the union, and since the mind does not function differently in one sex than in the other, it is equally capable of the same things in both.

This is even clearer if we consider the head, which is the unique organ of the sciences and the place where the mind exercises its functions. A most exact anatomical study shows no difference here between men and women; their brains are exactly like ours. The impressions of the senses are received and assembled in the same way and are not stored differently for the imagination and the memory. Women hear with their ears as we do, see with their eyes, and taste with their tongue. There is nothing peculiar in the disposition of these organs, except that women's are usually more sensitive, which is an advantage. External objects affect them in the same way: light through the eyes and sound through the ears. (Poullain de la Barre, *De l'égalité des deux sexes* (60))

h. This delicacy of the fibres of the brain is usually found in women, and it gives them great understanding of everything that strikes the senses. It is for women to decide on fashions, judge language, discern good tone and fine manners ... Everything that depends upon taste is within their area of competence, but overall they are incapable of discerning truths which are slightly difficult to find. Everything abstract is incomprehensible to them. They cannot use their imagination for working out complex and tangled questions ...

If it is certain that this delicacy of the fibres of the brain is the principal cause of all these effects, it is not equally certain that it can be found in all women. Or if it be found in them, their animal spirits are sometimes so proportioned to the fibres that some women are found to have stronger minds than some men. This strength of the mind consists in a certain mixture of the animal spirits and their operation with the brain fibres; and sometimes women have the right mixture. There are strong, constant women, and there are weak, inconstant men. ...

For it need not be imagined that all men or all women of the same age, nationality, or family have the same brain constitution. It is more appropriate to believe that just as no two faces are entirely alike, no two imaginations are wholly alike, and that all men, women, and children differ from each other only in degree with regard to the delicacy of their brain fibres. For just as we should not hastily suppose an essential *identity* between things in which we see no differences, so we should not posit essential differences where we do not find perfect *identity*. For these are mistakes we usually make. (Malebranche, *La recherche de la vérité* II.2.1.1)

i. GOD does nothing in vain, he gives no Power of Faculty which he has not allotted to some proportionate use, if therefore he has given to Mankind a Rational Mind, every individual Understanding ought to be employ'd in somewhat worthy of it. The Meanest Person shou'd Think as *Justly*, tho' not as *Capaciously*, as the greatest Philosopher. And if the Understanding be made for the Contemplation of Truth, and I know not what else it can be made for, either there are many understandings who are never able to attain what they were design'd and fitted for, which is contrary to the Supposition that GOD made nothing in Vain, or else the very meanest must be put in a way of attaining it: Now how can this be if all that which goes to the composition of a Knowing Man in th'account of the World, be necessary to make one so? All have not leisure to Learn Languages and pore on Books, nor Opportunity to Converse with the Learned; but all may *Think*, may use their own Faculties rightly, and consult the Master who is within them. (Mary Astell, *A Serious Proposal to the Ladies* II. 3. 4 (168))

Marie le Jars de Gournay was closely acquainted with Michel de Montaigne and edited posthumous editions of his *Essais*. Though she was a representative of the French Renaissance rather than of Scholasticism, her defence of the equality of men and women is explicitly using a Thomistic language and Aristotelian argument. Gournay is closely paraphrasing Aristotle's *Metaphysics* 1058a30–b25 when she argues that men and women are equal because they belong to the same species, whereas bodily difference is only accidental (a). She presents a clear cut example of the 'philosopher's' argument that Marinella had criticised two decades earlier (6c). Anna Maria van Schurman wrote a detailed syllogistic argument in defence of the education of women. She was the protégé of Gisbertus Voetius, rector of the University of Utrecht and one of Descartes's most prominent scholastic critics. Schurman was closely attached to the university and her treatise is in many respects the most outstanding example of a (in her case reformed) scholastic defence of women. Schurman argues that since women have the mental capacity to study, they are entitled to do so. One of her arguments is based on the Aristotelian principle that 'nature makes nothing in vain' (b). If women had capacities that they were not allowed to develop, it would be against the aim of nature. Schurman's argument is strictly about women's equal, but not superior, mental capacities and she did explicitly distance herself from the rhetoric of the *querelle des femmes*. In a letter to her father in Christ, André Rivet, she confesses that it troubles her modesty to read Marinella's otherwise excellent treatise, see Schurman, ed. and trans. Irwin (55). Schurman corresponded with Gournay and in letters to Rivet she does repeatedly praise her, but also make some reservations concerning her *Égalité des hommes et des femmes* (1622). On Gournay and Schurman, see Schiebinger 1989, 166–167; Irwin 1998; Hillman 2002; Stuurman 2005; Spang 2009.

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Right at the beginning of his *Discours de la Méthode*, Descartes famously claims that the power of judging well, here equated with reason and good sense, is equal in all humans (c). According to Descartes, a judgment consists of two parts: a perception of the intellect and an act of the will. In order to judge correctly and avoid mistakes, the will must assent only to clear and distinct perceptions; see *Principia philosophiae* I.32–34 and VII.4.3. When Descartes claims that the power of judgment is equal in all humans he is primarily referring to the capacity of the will. Descartes did not think that all humans have equal intellectual capacities (d). His dedicatory letter to Elisabeth is interesting for several reasons. First, Descartes shows his awareness of the fact that differences in intellectual capacity may depend on education as well as inborn abilities. Second, he makes it clear that he finds some women (here represented by Elisabeth) to be as capable of outstanding intellectual ability as some men. Finally, the letter sheds further light on Descartes's claim that it is the will rather than the intellect that is equal in all humans, a claim that is often overlooked in interpretations of Descartes's conception of the equal distribution of reason. For a detailed discussion of the role of the will in Descartes's claim about equality, see Reuter 2013, and for a broader discussion of how he influenced arguments about the equality between men and women, see Harth 1992; Bordo 1999; Broad 2002; Stuurman 2004, 2005; Hutton 2005.

François Poullain de la Barre relied on explicitly Cartesian arguments in order to show that men and women are in all respects equal. He uses Descartes's method of doubt in order to rid himself of prejudices and he refers to clear and distinct ideas as the ultimate foundation of truth (e). Though Poullain's version of the claim that the mind has no sex is rooted in Descartes's distinction between the mind and the body (f), he did, like many late seventeenth-century Cartesians, emphasise the union of mind and body rather than their distinction. It was thus important for him to argue that the bodily organs involved in perception and thinking are also similar and equally capable in men and women (g). Here Poullain is relying on Descartes's mechanistic physiology and questioning previous physiological theories, which explained women's inferior intellectual capacities by her cold and moist nature. On Poullain's thought, see Stuurman 2004; Welch 2002; Reuter 2013. Descartes's mechanistic physiology did not automatically lead to the claim that men and women have similar brains, though. Malebranche, who generally followed a Cartesian mechanist conception of the body, argued that there is a physiological difference between the brains of men and women, even though this difference is gradual rather than essential (h). Malebranche's view on women's capacity of reason is diversified by the fact that he did, like Descartes, emphasise that it is the freedom to assent or dissent that is ultimately

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responsible for whether we err or not, see *La recherche de la vérité* III.2.9. Malebranche does nowhere indicate that the freedom of assent would be lesser in women and they are thus as able to avoid error as are men, even if their brains are different and the scope of their learning narrower. Rather than being considered misogynistic, Malebranche was cited in favour of women's intellectual capacities by female writers such as Mary Astell and Mary Chudleigh, see Broad 2012.

Mary Astell's *A Serious Proposal to the Ladies*, part I (1694) and part II (1697), is the most detailed defence of women's intellectual capacities written by a seventeenth-century woman. Astell combines the theological argument that God does nothing in vain, found also in Schurman's treatise (b), with an explicitly Cartesian line of argumentation (i). She emphasises that everyone, though not necessarily learned and well read, is able to use her faculties rightly and think for herself. We should note the distinction Astell makes between thinking 'justly' and thinking 'capaciously', which relies on the idea that if we judge correctly, we are able to avoid error also in cases when our knowledge is limited in scope, see also *Serious Proposal* II.3.4., 179. Like Descartes and Malebranche before her, Astell claims that it is ultimately the capacity to give or withhold assent that is equal in all humans, male and female. Astell corresponded on philosophical and theological matters with John Norris, who introduced Malebranche's philosophy in Britain, and, in many respects, she developed her thought at the centre of the British reception of Cartesian philosophy. In addition to drawing on Descartes and Malebranche, Astell draws heavily on Arnauld's and Nicole's *La logique ou l'art de penser* when she describes the right method of thinking and searching for knowledge, see *Serious Proposal* II.3.4. On Astell's thought, see Broad 2002, 90–113; Springborg 2005.

8 Enlightenment Debates

a. One could easily realise, however, that the exterior differences noticeable, for example, in the physiognomies of the Chinese and the Swedes, have no influence on their wits, and that, if all our ideas, as shown by Mr. Locke, come to us from the senses, and the northern people have no greater number of senses than the oriental people, it follows that they have by their physiological conformation equal mental capacities.

It is only to the different constitutions of empires, and consequently, to moral causes that we ought to attribute all the difference observable in the wits and characters of nations. (Helvétius, *De l'esprit* III.29)

b. Now, if we first take away the half from these eight hundred thousand persons, that is, the women, whose education and way of life oppose the progress they might make in the arts and sciences; (Helvétius, *De l'esprit* III.27)

c. The great difference that is observable in the characters of the sexes, Hortensia, as they display themselves in the scenes of social life, has given rise to much false speculation on the natural qualities of the female mind. – For though the doctrine of innate ideas, and innate affections, are in great measure exploded by the learned, yet few persons reason so closely and so accurately on abstract subjects as, through a long chain of deductions, to bring forth a conclusion which in no respect militates with their premises. (Macaulay, *Letters on Education* I.22 (203))

d. A perfect woman and a perfect man should not be more alike in mind than in looks, and perfection is not susceptible of more or less. (Rousseau, *Emile* V (693))

e. The search for abstract and speculative truths, for principles and axioms in the sciences, for everything which tends to generalise ideas, is beyond the grasp of women. All their studies must be related to practice. It is for them to apply the principles discovered by man, and to make the observations which lead man to establish those principles ... Nor do they have enough precision and attention to succeed in the exact sciences. Natural sciences are for the one of the two which is more active, moves lively, and sees more objects, that is, the sex which has more strength and uses it more to judge the relations of sensible beings and the laws of nature ... Woman has more wit, man more genius; woman observes, man reasons. From this conjunction results the clearest light and the most complete science which the human mind can acquire by itself – in a word, the surest knowledge of oneself and others which is within the reach of our species. (Rousseau, *Emile* V (736–737))

f. Also, it can be that their organ of voice, which is more flexible and fitter for all sorts of movements, adjusts itself more easily to the expressions of passions and to all variations of theatrical modulation. Finally, women soon excel in all arts which demand only skill, because this quality depends on the rapid succession of ideas and movements which the organisation of their sex makes easier for them.

There is still one physical quality making the sensible parts of women more mobile: the softness which is particular to them and which has been well known to all physicians since Hippocrates (1). ...

(1) 'I think that the flesh of a woman is more diverse and soft than that of a man', Book I, *de Mulier[um] Morbis*. (Roussel, *Système physique et moral de la femme* I.4 (16))

g. Fix, as justly and impartially as you can, the advantages of men and women. But do not forget that nothing penetrates further than a certain depth of conviction in the understanding of women, owing to the lack of reflexion and principles; that the ideas of justice, virtue, vice, goodness, and badness float on the surface of their soul; that they have conserved self-love and self-interest with all the energy of nature; and that though they are more civilised than us from the outside, they have remained true savages from the inside, all more or less Machiavellian ... If we have more

reason than women, they do have more instinct than we ... They are seldom systematic, always following the rule of the moment ... When they have genius, I think its kind is more original than in us. (Diderot, 'Sur les femmes' (956–958))

h. How far delicacy of taste, and that of passion, are connected together in the original frame of the mind, it is hard to determine. To me there appears a very considerable connexion between them. For we may observe that women, who have more delicate passions than men, have also a more delicate taste of the ornaments of life, of dress, equipage, and the ordinary decencies of behaviour. Any excellency in these hits their taste much sooner than ours; and when you please their taste, you soon engage their affections. (Hume, 'The Delicacy of Taste and Passions', *Essays Moral, Political and Literary* I.1)

i. What better school for manners, than the company of virtuous women; where the mutual endeavour to please must insensibly polish the mind, where the example of the female softness and modesty must communicate itself to their admirers, and where the delicacy of that sex puts every one on his guard, lest he give offence by any breach of decency. (Hume, 'Of the Rise and Progress of the Arts and Sciences', *Essays Moral, Political and Literary* I.14)

j. [Women's] senses are inflamed, and their understandings neglected, consequently they become the prey of their senses, delicately termed sensibility, and are blown about by every momentary gust of feeling. Civilized women are, therefore, so weakened by false refinement, that, respecting morals, their condition is much below what it would be were they left in a state nearer to nature ... All their thoughts turn on things calculated to excite emotion; and feeling, when they should reason, their conduct is unstable, and their opinions are wavering – not the wavering produced by deliberation or progressive views, but by contradictory emotions ... Miserable, indeed, must be that being whose cultivation of mind has only tended to inflame its passions! A distinction should be made between inflaming and strengthening them. The passions thus pampered, whilst the judgment is left unformed, what can be expected to ensue? – Undoubtedly, a mixture of madness and folly! (Wollstonecraft, *A Vindication of the Rights of Woman* (129–130))

k. And what is sensibility? 'Quickness of sensation; quickness of perception; delicacy.' Thus it is defined by Dr. Johnson; and the definition gives me no other idea than of the most exquisitely polished instinct. I discern not a trace of the image of God in either sensation or matter. Refined seventy times seven, they are still material; intellect dwells not there; nor will fire ever make lead gold! (Wollstonecraft, *A Vindication of the Rights of Woman* (132))

l. I still insist, that not only the virtue, but the *knowledge* of the two sexes should be the same in nature, if not in degree, and that women, considered not only as moral, but rational creatures, ought to endeavour to acquire human virtues (or perfections) by the *same* means as men, instead of being educated like a fanciful kind of *half* being – one of Rousseau's wild chimeras. (Wollstonecraft, *A Vindication of the Rights of Woman* (108))

m. The power of generalizing ideas, of drawing comprehensive conclusions from individual observations, is the only acquirement, for an immortal being, that really deserves the name of knowledge. Merely to observe, without endeavouring to account for any thing, may (in a very incomplete manner) serve as the common sense of life; but where is the store laid up that is to clothe the soul when it leaves the body? (Wollstonecraft, *A Vindication of the Rights of Woman* (123))

In *De l'esprit* (1758–9) Helvétius challenged Montesquieu's claim, developed in *L'Esprit des lois* (1748), that human character is affected by climate (**a**). Helvétius is more interested in showing that there are no innate differences between the different peoples and nations than in arguing for the equality between men and women, but it is evident that he did not count on any innate difference between the sexes either (**b**). In her *Letters on Education* (1790), written to the fictive young recipient Hortensia, Catharine Macaulay uses Locke's critique of innate ideas explicitly in order to argue that there are no innate differences between the mental capacities of the sexes (**c**).

Several scholars have by now argued that authors associated with the French Enlightenment developed a historically new model of complementary difference between the natures and capacities of the two sexes, see Schiebinger 1989; Laqueur 1990; Steinbrügge 1995; Vila 1995 and 1998. Jean-Jacques Rousseau's model for the education of boys and girls, presented in *Emile, ou de l'éducation* (1762), belongs to this development. He defended a strictly complementary model for the perfection of the mental capacities of men and women (**d**) and argued that the couple should complement each other also when acquiring knowledge (**e**). Rousseau did think that the difference between men and women is in some sense natural, but by natural he meant a conclusion drawn by natural reason rather than a distinction based on physical nature, see *Emile* V (697). He claimed that men and women are essentially similar when we consider the physical order to which the constitution of the human species belongs. Sex, and thus the difference between the sexes, belongs to the moral, not the physical order. Rousseau emphasises that a woman *should* be passive and weak rather than that she *is* so by her physical nature, see *Emile* V (692–693). When emphasising the similarity of species and when placing difference in the moral rather than physical order, Rousseau is closer to Helvétius than to the defenders of a strictly physiological difference, even though he draws different conclusions about the desirability of similarity and defends difference in the moral order.

A strictly physiologically based theory of the complementary difference between the sexes was developed by Pierre Roussel in his *Système physique et moral de la femme* (1775). Roussel located difference in the different sensibilities of women and men and he gave this difference a detailed

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physiological explanation (**f**). A women's sensibility consists in being more easily moved than moving. She possesses 'vital qualities in the most exquisite degree, but with very limited physical capacities; ... her existence consists more in sensations, than in ideas and bodily movements' (*Système* I.4 (17)). Sexual difference is ultimately based on a difference in the quantity and quality of the mucus tissue by which the bodily organs and their fluids communicate with each other, see *Système* I.1. The highest form of sensibility, intelligence, is according to Roussel centred in the brain and in women this centre competes with other centres of sensibility, such as the womb. Intense study and other intellectual endeavours are therefore unhealthy for women, see *Système* I.7. Roussel's emphasis on female receptivity and passivity resembles the picture given already in ancient medicine; it is no coincidence that he refers to Hippocrates' greatly influential idea about the softness of the female flesh, but he differs from his predecessors by replacing the idea of a woman as a less active and undeveloped male with an attempt to establish two different standards for physiological and psychological perfection. On Roussel's conception of sexual difference, see Vila 1995.

The French physicists shared their interest in the physiological origin of female psychology with materialist philosophers such as Denis Diderot. In his passionately polemical essay 'Sur les femmes' (1772), Diderot chart the psychological differences between men and women (**g**) and gives them a profoundly physiological explanation. He claims that woman's exalted psychology, including her tendency towards religious ecstasy, has its origin in her difficulties to achieve sexual pleasure ('Sur les femmes' (950)). Even though Diderot's essay may be misogynistic in its implications, it is not so in spirit. Diderot is rather intending to defend women, who are oppressed by men as well as by their own physiology. On Diderot's 'Sur les femmes' and its connection to his anthropological writings, see Mander 2005.

The idea of female sensibility and delicacy was prevalent also among the authors of the Scottish Enlightenment, but their discourse of sensibility was anchored in a physiology of the nerves that was less strictly tied to sexual difference than the French model. When David Hume describes the delicacy of female passion and taste (**h**), he is not interested in the physiological origin of delicacy. He focuses on the utility of female sensibility and argues that women's sensibility has been beneficial for the historical development of civilisation. In his study of the progress of the arts and sciences, Hume emphasises the role of gallantry as a civilising force. Gallantry is grounded in the natural attraction between the sexes, but its development depends on historical, social and economic factors. Women's delicacy of passion and taste constitutes an important aspect of civilising gallantry (**i**). In her vindication of women's right to rely on and improve their intellectual capacity, Mary Wollstonecraft

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attacked Rousseau's *Emile* as well as the Scottish physicist John Gregory's bestselling *A Father's Legacy to his Daughters* (1774), which popularised ideas about the civilising effect of female sensibility. She argues that sensibility is mere inflamed sensation and cannot constitute the basis of morality (**j**). True constancy of mind can be based only on reason and therefore passions should not be inflamed, but strengthened in accordance with reason. Wollstonecraft's thought is based on a rationalist theology, which she shared with Catharine Macaulay, among others, and according to which it is the immaterial rational soul that is made in the image of God. The problem with sensibility, as it is defined by Samuel Johnson in *A Dictionary of the English Language* (vol. II, sixth edition, 1785), is that it is purely sensuous and material (**k**). As such sensibility is something humans share with other creatures and it cannot be the basis of true virtue, understood as a perfection of the capacity by which humans, and only humans, are made in the image of God, see also *Vindication of the Rights of Woman* (122). (Emotivist and more or less materialist philosophers, such as Hume, did of course think that being independent on any concept of an immaterial rational soul was a benefit rather than a weakness.) Wollstonecraft follows Macaulay also in emphasising that all differences between the sexes comes from education, understood in a broad sense as all kinds of external influences and impressions. If girls and boys are both taught to exercise their understandings there will not be any specific female sensibility. Wollstonecraft's critique of sensibility echoes Rousseau's critique of refined civilisation, but her critique of his dual standard of perfection is equally merciless (**l**). Wollstonecraft does explicitly attack Rousseau's idea about complementary knowledge and she argues that one can gain true knowledge only by exercising the capacity to generalise and draw comprehensive conclusions (**m**). Again her argument is ultimately based on the assumption that only knowledge specific for the immortal rational soul can count as true knowledge. For discussions of the Scottish discourse of sensibility and Wollstonecraft as its critic, see Barker-Benfield 1992; Moran 2005; Taylor 2005; O'Brien 2009.

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Abbreviations

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- DK = Diels, H., & Krantz, W. (Eds.). (1961). *Die Fragmente der Vorsokratiker*, 3 vols. Berlin: Weidmann.
- LS = Long, A. A., & Sedley, D. N. (1987). *The Hellenistic Philosophers I-II*. Cambridge: Cambridge University Press.
- Oph = Opera Philosophica.
- Oth = Opera Theologica.
- PG = *Patrologiae Cursus Completus*, Series Graeca. J.-P. Migne (Ed.), Paris 1857–1866.
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