Anne Reboul *Editor*

Mind, Values, and Metaphysics

Philosophical Essays in Honor of Kevin Mulligan - Volume 1

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Although (and maybe because) I really tried, I was unable to deceive myself into thinking that the writing of a new philosophical paper was compatible with finishing my thesis in time. I decided instead to make a little bundle of tropes, a logical musing, an affective picture (no photographic ones, I know). To you this little bundle; whether you make it true, whether I made it valuable, its existence is grounded in yours.

K.M.: Tollendo Tollens

"L'ennui est la marque des esprits médiocres." (Albert I)
Tous les jours je remets l'ouvrage sur le métier,
Œuvrant à découvrir ce que cachent les ombres,
Les poupées de Platon, les motifs avoués,
Les illusions sucrées dans lesquelles l'esprit sombre.
Et tous les jours encore je marche face au vent,
Narguant les politiques de notre Alma Mater,
Dirigeant l'étudiant au large du continent,
Ou fessant le thésard un peu trop tête en l'air.

Tant de temps a passé, et je combats encore,
Oublieux de l'effort, dédaignant le repos.
Les années je les donne, ma santé et mon or,
La vérité le veut, la vérité le vaut.
Et si parfois, j'avoue, je me trouve un peu las,
Nulle autre destinée que la philosophie,
Soyez-en convaincus, n'était faite pour moi.

Qu'on soit donc prévenu, rien ne m'arrêtera,
En prenant des années ma passion s'affermit.
Dès lors je vous promets encore bien des éclats!

Amanda Garcia

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Chapter 1
Introduction

Anne Reboul

Abstract The present volume originates from a collection of papers presented to Kevin Mulligan in 2011 to celebrate his 25 years of professorship in Geneva. It is the first volume of a two-volume set reproducing those papers. The contributors have written papers addressing the main topics Mulligan himself has been interested in during his career.

1.1 Introduction

The present volume originates from a collection of papers presented to Kevin Mulligan in 2011 to celebrate his 25 years of professorship in Geneva. It is the first volume of a two-volume set reproducing those papers. The contributors have written papers addressing the main topics Mulligan himself has been interested in during his career.

The first volume is dedicated to two main fields: *Metaphysics,* with a specific interest in truth-makers, tropes and relations, and *History of Philosophy,* with an emphasis on Austrian philosophy. The second volume gathers papers on *Ethics, Values and Emotions,* on *Epistemology, Perception and Consciousness,* as well as *Philosophy of Mind and Philosophy of Language*.

In this introduction, I will briefly indicate the gist of each chapter in the present first volume.

1.2 Part I: Metaphysics

Part I opens with a chapter by Jessica Leech, dedicated to 'Formal objects and the argument from knowledge'. Formal objects include *propositions, facts, states of affairs, properties*, *classes, concepts,* etc. Though the existence of such formal

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objects has sometimes been defended on the grounds that truth-bearers need truth-makers, this meets with a number of difficulties. Mulligan has proposed an alternative argument, the 'argument from knowledge'. He notes that it is in the nature of *intentional* states and acts such as belief, judgment, knowledge, desire, etc., to be *about* something. Among these intentional states and acts, some, e.g. knowledge, are specific in that they are always correct, while others, e.g. beliefs, may be wrong. The second can only be accounted for on the basis of the first, which need formal objects. Mulligan describes apprehension that *p* on the model of acquaintance of an object (both require *identification*) and disarms metaphysic objections by denying that facts are ontologically fundamental. Leech's aim, besides her discussion of Mulligan's argument from knowledge, is to investigate whether this argument can be extended to other kinds of formal objects and what this says about the nature of formal objects. Mulligan himself does so for values and Leech discusses his account. On Mulligan's view, according to Leech, the fundamental furniture of the world is made up of substances, states, processes and events, while the objects of our knowledge are properties, values, propositions, facts or states of affairs, and it is because such formal objects are dependent upon intentional states that they are not ontologically fundamental. This makes formal objects similar on this point to social objects, e.g. money.

Arianna Betti discusses 'The naming of facts and the methodology of language-based metaphysics'. Betti examines two attitudes to facts, *revisionary* metaphysics, which aims to improve the structure of our thoughts about the world, and *descriptive* metaphysics, which restricts itself to discussing the structure of our thoughts as it is. While the second has a legitimate interest in the naming of facts, the first does not. There are, according to Betti, two conceptions of facts: compositional and propositional, the compositional view being generally adopted by revisionary metaphysicians, while the propositional view is usual among descriptive metaphysicians, who also advocate a language-based metaphysics. Betti examines the expression 'the fact that *p*' and denies that it is a singular term on the basis of a destructive criticism of the most obvious analysis of it in terms of definite description. Such analyses, e.g. Hochberg's, smuggle metaphysically compositional tenets into the semantic analysis, thus reversing the legitimate direction of language-based metaphysics and begging the question. What is more, from a philosophy of ordinary language point of view, the use of the word 'fact' does not justify philosophers' views. Indeed, ordinary talk of facts seems to correspond to what philosophers consider to be states of affairs. Betti's conclusion is that we can dispense of facts either as truth-makers or as referents for expressions such as 'the fact that *p*'.

Johannes Stern, writing on 'The truth about predicates and connectives', deals with truth-bearers rather than truth-makers and examines Mulligan's proposal relative to the logical form of truth ascriptions. Mulligan is in fact interested in the expression 'It is true that—' and considers it to be an operator or connective rather than a predicate and claims that the cases where a predicate (i.e. '—is true') is used would be better analyzed by reducing them to the operator-connective case. After discussing some syntactic difficulties with this proposal, Stern notes that they are hardly crucial given the distinction between the grammatical and the logical

forms of a sentence. One strong argument in favour of Mulligan's analysis is that it highlights the parallelism between truth and modal ascriptions, which can similarly be expressed via either a predicate '—is necessary' or an operator-connective 'It is necessary that—'. This allows a homogeneous treatment of truth and modality, avoiding some puzzles about the logical form of the principles linking them. An additional advantage is that the operator framework avoids paradox, though, as this restricts its expressive power, Stern argues that the issue of paradox should not be taken as central. This is because the necessity of being faithful to the expressive possibilities of natural language (in which paradoxes can be generated) is more important than the necessity of avoiding paradox, which, in any case, should be dealt with within reasoning rather than within language.

Jan Wolenski, in 'Truth-makers and Convention T', discusses whether convention T has any place in the theory of truth-makers proposed by Mulligan, Simons and Smith. Wolenski notes that convention T and this account of truth-makers can be seen as either complementary or incompatible. Wolenski defends the second option and notes that truth-makers theory must be complemented in order to account for statements about the future. This is not the case, however, for a semantic (model-theoretic) theory of truth, and Wolenski argues that convention T should be regarded as separate from the metaphysical grounding of truth offered by the truth-makers theory.

Fabrice Correia, in 'From Grounding to Truth-Making: Some Thoughts', addresses neither truth-makers nor truth-bearers, but rather the theory of truth-making itself. He approaches the problem from the perspective of grounding truth, that is of an objective metaphysical explanation that can be expressed using 'because'. Correia proposes a distinction among principles governing truth-making between basic principles relative to truth, grounding and existence, and those that are derived from them. The principles about truth-making are thus divided between *logical* principles that are about the interaction between truth-making and the logical constants, and *structural* principles that are not. Correia shows that logical principles cannot be derived from structural principles without the addition of connecting principles and proposes a set of *strong* and a set of *weak* semantic principles to fill that function. Correia then turns to the notion of *grounding* and advocates the view that there could be both conceptualist and wordly notions of grounding.

Pierre Livet, writing on 'Fundamental Ontology and Ontology of Epistemic Processes', also concentrates on making true, asking what kind of relation it is. He proposes to see it as an epistemic process of explicitation. Mulligan has advocated a view according to which the logical form of truth ascriptions includes a connector ('because') which has no semantic value, with the consequence that making true is not a relation. It is this view that Livet wants to link to relations between epistemic and ontological stances. Mulligan's move to the basic (ontological) entities, i.e. *truth-makers maximalism,* meets with difficulties raised by negative and disjunctive facts. Taking into account the ontological bases of epistemic processes would avoid these difficulties. Such an approach has to identify the basic ontological entities, describe the epistemic processes and their ontological types and show coherence between these entities and processes. Livet proposes to rely here on Mulligan's 'tie because of essence'.

Keith Lehrer and Joseph Tolliver are concerned with 'Tropes and Truth' and examine the type of relation through which a truth connection can be secured. Trope theory is a way of eliminating the need for universals and properties. A central question is whether tropes can be truth-makers for descriptions of the world. Answering this question goes through describing how tropes work. Lehrer and Tolliver begin with Goodman's theory of *exemplification,* where a sample refers to a predicate or label, which in turn refers back to it. Lehrer and Tolliver reject parts of Goodman's account, leading them to talk of *exemplarization* rather than exemplification. They note that when a trope is exemplarized, used to pick out a plurality of objects, it will be true of itself. In other words, the trope refers to itself, not to a predicate or label, and truth is secured through this reflexive loop, because it excludes the possibility of any mistake. This is true only as long as no notion of predicate, label or property is introduced. The trope is used representationally to discriminate objects it represents from other objects, and it is only after this stage that talk of predicates, labels or properties can be introduced. In the same way, talk of similarity follows from the exemplarization of the trope but does not trigger it or explain it.

Hochberg, on 'The Facts of Tropes', discusses the choice between tropes and facts. Mulligan has argued in favour of tropes based on the claim that facts are not as ontologically fundamental as tropes and so not fundamental as truth-makers. Hochberg notes that Mulligan's view is that facts can be reduced to tropes, on the ground of his conviction that the logical form of truth ascriptions involve the 'because' operator. Hochberg defends facts and truth-conditions, as opposed to tropes and truth grounds, because the former do not mandate an appeal to non-existent entities. In addition, facts not only are needed in any adequate ontological account of truth but also for an account of thought intentionality, as well as for an account of our apprehension of relations.

Fraser MacBride, in 'The Transcendental Metaphysics of G. F. Stout: A Defence and Elaboration of Trope Theory', discusses an exchange between Moore and Stout in 1923 over the universal or particular character of concrete things. Though Moore is generally supposed to have prevailed and imposed the universal character of concrete things, MacBride shows that Moore's arguments rested on a misunderstanding of what Stout said in defence of the particular view. Stout thought that each concrete thing has its own particular quality, e.g. its own particular redness (i.e. a trope). Moore erroneously understood this to mean that the redness concerned must characterize only that single object, whereas Stout meant that two things of the same shade are two instances of the same kind of character. Indeed, Stout anticipated Ramsey's repudiation of the particular-universal distinction based on his view of what is given in perceptual experience, that is, characters as particulars. Stout's view was based on a fundamental insight that unity is primitive, an insight that led him to reject nominalism as well as Bradley's regress. In his rejection of universals, Stout based his claim as the notion of a distributive unity. This interpretation of Stout is controversial, however, and MacBridge defends his interpretation based on Stout's rejection of determinable as an additional quality, which, according to him, shows Stout's commitment to a treatment of 'red' or 'colour' as general rather than singular terms. Stout's central argument for his position is to claim, contrary to

Russell's distinction between knowledge of things and knowledge of truths, that we cannot know a substance and not its character, a vindication for tropes.

Andrea Bottani presents 'Two Problems for Resemblance Nominalism'. Resemblance nominalism claims that there are neither universals nor tropes, and that properties depend on primitive resemblance among particulars. In his chapter, Bottani targets specifically Rodriguez-Pereira's variety of resemblance nominalism, notably his notion of a 'lowest determinate' property shared by similar things. Rodriguez-Pereira meets with a first objection in Goodman's imperfect community, a difficulty that, despite his efforts, he is not able to avoid without his account falling into circularity. Additionally, the notion of lowest determinate property is so fine-grained that it raises further problems: It is so fine-grained that it is not clear that more than one actual thing can have it; it is not clear either that it could be perceived. Additionally, lowest determinates have highest determinables that are disjunctions of them. Bottani objects to that view and points out that a doctrine that rests on resemblance between properties rather than particulars is a fairly strange sort of nominalism.

In 'Counting the Colours', Benjamin Schnieder discusses four different solutions to the question of how we ordinarily count the colours of an object. The chapter opens with the presentation of a puzzle: If an evenly coloured object, e.g. a lemon, is lemon yellow, it seems natural to conclude that it is yellow. But, given that yellow and lemon yellow are not the same colours, it seems that this evenly coloured object has two colours. Schnieder then turns to the four solutions. A first one consists in saying that lemon yellow is a shade of colour rather than a colour. This, however, is found wanting by Schnieder who points out that shades of colour are colours, and that this only drives the problem one step back; presumably the lemon is a specific shade of lemon yellow as well as of the colour lemon yellow. The second solution appeals to tropes. Schnieder proposes to treat the colour(s) of an object as a non-shareable particular, i.e. a trope. Turning back to the puzzle, Schnieder notes that the lemon, being evenly coloured, has only one colour-*trope,* though this single colour-trope is an instance of two colour-*types,* yellow and lemon yellow. A problem with this solution is that we do seem to be able to count colour-types as well as colour-tropes. The third solution relies on the distinction between *determinables* and *determinates*. Lemon yellow is a determinate of the determinable yellow and it is the determinate rather than the determinable colours that we count, or at least we never count both determinate and determinable colours simultaneously. The fourth solution is counting colours region wise: As the lemon is evenly coloured, all of its regions are identically coloured and it thus has a single colour.

Leonardi writes on 'Predication', which he proposes to treat as on a par with reference, that is, as a primitive semantic notion. Basically, both names and predicates are marks, but they play different roles, the first to mark out and the second to mark in. Names mark semantic value, predicates mark elements in their range. Predicates are usually anchored through instances and turn the things they mark into standard samples. Leonardi then turns to Frege's view of predicates as unsaturated expressions with one or more place(s) to be filled by variables. Predication is a saturation of a predicate. The main difference with Leonardi's own view is that Frege sees the predicate as denotating a concept, the concept itself determining an extension. The

ontological consequence is that classification belongs to what there is on Frege's view, while no such consequence follows on viewing predication as introducing classification directly on objects, as is the case on Leonardi's view. Davidson's account takes off from the unity of the sentence, which is the truth-bearer. Predicates are then specified as telling what is true of the entities named by the constants or quantified over by the variables. They are not associated with any kind of entities. Leonardi takes issue with that account, pointing out that we grasp the notion of truth from the notions of reference and predication, and that we learn language from finding out what the objects of reference and predication are. This leads Leonardi to a contrast between truth, linked to *exacteness,* and meaning, linked to *precision*. He proposes that the linguistic fix on things is *via coordinative definitions,* making problems such as the indeterminacy of language vanish away.

Damiano Costa discusses 'Temporal Parts and Spatial Location' aiming at a characterization of temporal parts. The central issue is that temporal parts of an object exclude 'smaller parts' of that object: For instance, temporal parts of Sam incorporate all of Sam, and Sam's heart or Sam's brain cannot be temporal parts of him. Two approaches have been proposed to account for this feature of temporal parts. The *mereological* one rejects such smaller parts on the grounds that they do not overlap with every part of the object at a certain time. The *spatial* one rejects them as not being of the same spatial size as the whole object, which is a requirement that temporal parts must satisfy. Costa notes that objections to the spatial account usually rest on its failure to account for entities outside space. However, there are two ways for a definition to fail: because it does not capture our intuitions; because it fails in a system realistic in the sense that its structure is isomorphic with the structure of the world. Costa returns to those smaller parts that are excluded from being temporal parts and proposes to characterize them as *synchronic parts,* i.e. spatial parts in time. An entity is thick if it has synchronic parts and is thin otherwise. Temporal parts are characterized by being spatially co-located with their wholes throughout their existence. The objection thus is that this definition fails for entities outside space, such as events, mental events or time itself. Time, however, is a thin entity and, hence, the spatial condition is irrelevant to it. Costa introduces the notion of weak co-location, which solves the problem of entities outside space: Temporal parts are located at the same place as their wholes, as long as those wholes are located at all. This would fail for thick entities outside space. However, the existence of such entities is far from obvious. Costa turns to hybrid entities, entities with synchronic parts located inside space and synchronic parts located outside space. Such entities are located where their spatially located synchronic parts are. However, the solutions necessary to solve the objections to the spatial account are not spatial in nature, which is a reason to prefer the mereological account.

François Clementz speaks of 'Internal, Formal and Thin Relations'. Mulligan has proposed a distinction between thin and thick relational predicates. Clementz wants to investigate the link between that distinction and others, such as internal/external or formal/material. Clementz reminds the reader that Russell and Moore launched analytic philosophy through an attack against the 'doctrine of internal relations'. An internal relation is a relation that obtains in virtue of the nature of its

terms. Russell basically took it to mean that thin relations could be reduced to their terms and did not exist. However, Clementz considers the notion to be ambiguous between a relation either grounded in the properties of its relata or critical to one or both of its *relata,* in the second case of which, the properties concerned have to be essential. This yields four possibilities, the first three of which correspond to internal relations, while the fourth corresponds to external relations: grounded and contingent; grounded and essential, ungrounded and essential and ungrounded and contingent. Clementz targets the two essential varieties of internal relations. Regarding them, the *relata* should be given first-class ontological status in grounded essential internal relations, while the relation itself should be accorded it when it is 'directly constitutive', that is ungrounded and essential. Clementz comes back to grounded relations and asks whether they have any existence over and above the existence of their *relata*. He objects to reductionism on the basis that it is contradictory to both speak of internal relations and to deny them existence. Clementz thus pleads for relational truth-makers, even for grounded internal relations. Thin and thick relations are distinguished by their degree of generality. Mulligan is mainly interested in some thin relations, such as identity, resemblance, greater than / lesser than, dependence and justification, all of which are internal relations. Formal relations apply across all kinds of beings and are internal in virtue of being essential to their *relata*. However, Clementz sees internal relations as a fairly heterogeneous category. Mulligan claims that thick relational predications have thin relations as truth-makers, but the heterogeneity of thin relations must be taken into account in evaluating this claim.

Ingvar Johansson, in 'All Relations are Internal—The New Version', also deals with internal and external relations, but he is mainly concerned with the existence of external relations. Mulligan has argued that all relations are thin and internal, i.e. external relations do not exist. It should be noted here that Mulligan is not a reductionist about internal or thin relations. More precisely, Mulligan's view is that the truth-makers of thick relational predicates are thin internal relations. Johansson agrees that all truth-makers of such predicates are thin relations, but thinks that not all thin relations are internal. Mulligan considers that *relata* of the relational predicates can be either tropes (primary *relata*) or objects (secondary *relata*). Truth-bearers are often ambiguous as to whether the *relata* are primary or secondary. Johansson's interpretation is that all truth-maker relations are thin and internal relatives to their primary *relata*. Thick relational predicates can be reduced to thin relational predicates. Johansson proposes a distinction between internal relations: In a strong internal relation, the *relata* cannot exist independently of one another; in a weak internal relation, the relata can exist independently of one another, but if both exist, the relation is necessary. Spatial relations are central to any discussion about internal and external relations, and Johansson chooses the relation of *occupation*. '–occupies–', according to Mulligan, is a basic predicate, subtending other predicates such as '–is to the North of–', etc., and occupation is an external relation and, as such, can be dissolved. Mulligan takes the *relata* of external relations to be enduring things, and the way to dissolve the relation of occupation is through showing that there are no enduring things. As there can be no relations without *relata,* it follows

that there is no relation of occupation. Johansson takes issue with the idea that there are no enduring things. He defends, from the examples of *resemblance* and *greater than,* the existence of thick internal relations. Both relations are *in a certain respect*: In other words, the predicates concerned are not the thin predicates '–resembles–' and '–is greater than–', but rather the thick predicates '–resembles—in a certain respect' and '–is greater than—in a certain respect'. 'Respect' is a determinable. This is a departure from Mulligan, for whom all truth-makers are determinates, but not determinables. This is because, according to him, tropes are determinates not determinables. Johansson, on the other hand, considers that tropes can be either determinates or determinables. Determinables, indeed, are necessary for mathematical physics or, more generally, for making sense of measurement, and determinable tropes can only be *relata* of thick internal relations.

Philip Blum considers 'Connectives, Prenectives, and Dishonoured Cheques of Metaphysical Explanation' and returns to Mulligan's view of metaphysical explication. Against Künne's 'modest' proposal, centred on the truth-predicate, '–is true', Mulligan has argued that it is the truth-connective, 'It is true that–', that is fundamental. Under Mulligan's analysis, '*x* believes that *p*' is a hybrid connective, or *prenective,* that does not presuppose the existence of propositions. Indeed, under Mulligan's analysis, 'believes that–' is a predicate-forming predicate. The distinction between the truth-predicate and the truth-connective thus is motivated by an ontological worry: The first would commit us to the existence of propositions, while the second does not. This, however, completely undermines Künne's theory by removing truth-bearers. Blum thus defends Künne's claim that an account of truth cannot dispose of truth-bearers. But, equally, it cannot dispose, as Künne would have it, with truth-making.

Achille Varzi looks at 'because', a connective whose many philosophical uses Mulligan has done much to disentangle. Varzi concentrates on the 'because' we use when we behave as we do. Couched as a dialogue between Ali and Baba, his chapter begins by recalling the distinction between intentional acts, driven by a motive and non-intentional behaviour such as sneezing. Baba maintains that his intention of rearranging the bookshelf is reason enough for his action, while Ali disagrees. Neither will he accept that the result of Baba's action can count as an explanation for that action. Ali wants Baba to explain his action through a *grounded* desire and concedes that values or emotions can play a part in grounding desires. Baba denies that values themselves have to be grounded by anything more than by their obtaining (their truth). Explanations, according to him, have to stop at a certain point.

Ingar Brinck, Göran Hermerén, Johannes Persson and Nils-Eric Sahlins pursue the subject of explanation by explaining 'Why Metaphysicians Do Not Explain'. Though we explain in sciences as well as in everyday life, it is not clear that we explain in metaphysics. There are different varieties of explanation, e.g. causal, intentional, functional, and one can wonder whether these varieties are different in a fundamental way. If any is central, presumably it is the causal kind. Explanations in science are often couched in mathematical terms, and it is doubtful that mathematical explanations are causal. Betti contrasts causal, metaphysical and conceptual explanations on the basis of their *relata:* two objects in the first case, an

object and a truth in the second, and two truths in the third. However, the *relata* of causation must be of different kinds, and additionally, it is not clear that causation is a relation. Given that scientific explanations carry a lot of metaphysical baggage, it is important to examine whether the *relata* of metaphysical explanations and those of scientific explanations are identical. The authors propose that they are not identical and that indeed one should not confuse arguments, definitions and explanations. Regarding science, one should distinguish abductive inferences that are not explanatory from inferences to the best explanation that are. Are there inferences to the best explanation in metaphysics? According to Hochberg, there are and if this is the case, metaphysics is not limited to conceptual definitions. It can give explanations though this does not mean that metaphysicians explain.

Michael Esfeld closes Part I with a chapter on 'Science and Metaphysics: The Case of Quantum Physics'. According to Esfeld, metaphysics has to take science into account and to pronounce on the appropriate formulation of scientific theories. Esfeld takes the example of the measurement problem in quantum physics. The problem lies in three inconsistent claims. A potential solution is through a sort of *holism* due to non-separability, which does not allow the attribution of a complete set of properties to any individual quantum system. Esfeld notes that standard expositions of quantum theory present it as a combination of a linear dynamical equation in the absence of measurement and of a collapsed wave allowing measurement when one is made. It is the nature of the change of the wave function that is mysterious: Is it a real physical change or an epistemic change? Esfeld examines different answers to that question, finds them wanting and concludes that our best interpretation of quantum theory is still Bohm's.

1.3 Part II: History of Philosophy

Jan Sebestik opens the second part with a chapter on 'Bolzano's Lehrjahre'. Bolzano was born in an Italian-German merchant family in 1781, 10 years before Joseph II reformed the Austrian feudal regime, encouraging freedom of thought and learning, leading to the development of science. Bolzano discovered philosophy and mathematics at the University and got interested in the foundations of mathematics, where he was first influenced by the writings of Abraham Kästler, before reading widely in the subject, taking extensive notes. In 1979, Bolzano completed his philosophy training and pursued mathematics, before turning to theology, all the while keeping on with his work on the foundations of mathematics. On the completion of his theological studies, Bolzano applied both to the chairs of Mathematics and of Science of Religion, mistakenly thinking that an appointment to the second one would allow him to spread his ideas about the reform of society. He was nominated to both and was finally appointed to the chair of Science of Religion from which he was dismissed in 1819 for not conforming to the imperial goal, which was to educate docile citizens rather than to spread the ideals of the French Enlightenment. Despite this misfortune, Bolzano produced his *Theory of Science*.

Paola Cantù continues the investigation of Bolzano's contribution to philosophy with a chapter on 'Bolzano Versus Kant: Mathematics as a Scientia Universalis'. She discusses a change in Bolzano's theory of Mathematics, which he first characterizes as a theory of forms, before considering it to be a theory of quantities in later work. According to Cantù, this change did not detract from a deep continuity in Bolzano's thought about mathematics, and the change, though real, corresponds to an extension of the notion of quantity rather than to a contradiction between an earlier and a later stage of Bolzano's mathematical thought. The continuity in Bolzano's thought is illustrated by the four features of mathematics that remained essential throughout his work. Mathematical objects are not just quantities, because quantity is not applicable to all things and mathematics is a science of all things. The main difference between the early and the late Brentano has to do with the fact that his early preoccupation with the foundational problem of the demarcation between mathematics and other sciences has been abandoned in his later work. This leads to a radical reconception of the role of analytic and synthetic truths in mathematics, the first being definitions, while the second are axioms. In other words, the changes in Bolzano's conception of mathematics are due to changes in his logic and theory of truth, as well as with a radicalisation of his anti-Kantianism.

Alain de Libera, in the next chapter on 'Le direct et l'oblique: sur quelques aspects antiques et médiévaux de la théorie brentanienne des relatifs', looks at the adverbial theory of perception and intentionality in Brentano, Stuart Mills and Chisholm, and traces its roots in antique and medieval philosophy. De Libera notes that the link between Brentano and antique and medieval philosophers has been extensively discussed. The Brentanian distinction between *modus rectus* and *modus obliquus* was inspired by (and can be clarified through) the Millian theories of connotative and non-connotative names and of relative and non-relative names, themselves grounded in scholastic and, more precisely, Ockhamist semantics. Relative nouns are characterized by the fact that they necessarily imply the existence of another name (e.g. *father–son*), though those two terms connote the same fact. Applied to thought, this means that 'B-is-being-thought-of-by-A' and 'A-thinks-B' imply the existence of A-thinking-B. In other words, the adverbial theory is an original interpretation of the theory of connotation. Brentano's adverbial theory is also intrinsically linked to Aristotle's theory of categories restraining things to substances, while relatives are grounded in case-based distinctions. Relying on Aquinas' distinctions between different types of relations, notably 'real relations' versus 'reason relations', de Libera focuses on what he calls the *intentional relation,* based on a Cambridge change through which a thing becomes, e.g. knowable through the fact that someone knows something about it, which, on the other hand, is a real, not a Cambridge, change in the knower. Hence, the intentional relation is asymmetrical. Adverbialism allows Brentano to dispense with intentional objects, the truth-bearer being the judger him/herself, leading to a non-propositional theory of judgment as described by Chisholm. De Libera then turns to the Sauer–Chisholm debate over the nature of the intentional relation in Brentano, which Sauer rightly sees as Aristotelian in the sense that it is asymmetrical, hence not an ordinary relation, with

the consequence that it does not imply the existence of the intentional object. Thus Brentano's theory of the intentional relation is largely Aristotelian.

The next chapter 'Austrian Philosophy and its Institution: Remarks on the Philosophical Society of the University of Vienna (1888–1938)' by Denis Fisette examines the influence of the Philosophical Society of the University of Vienna on the evolution of Austrian philosophy until 1929 (the foundation of the Vienna Circle). Since Neurath, it has been recognized that Austrian philosophy developed in a specific and original way from Brentano on, taking a path independent from German philosophy. An important institutional factor in this evolution was the Philosophical Society of the University of Vienna, which was active from 1888 to 1938 and gathered both philosophers and scientists. Fisette focuses on the links between that institution and the Vienna Circle, which was founded in 1929. The Philosophical Society was officially founded in 1888 by students of Brentano with a strong endorsement of empiricist principles as shown by numerous conferences and discussions on British Empiricism. From its beginnings, the society was strongly interdisciplinary, as shown by the list of its members, where professional philosophers were not the majority and were rubbing shoulders with physicians, physicists, art historians, economists, mathematicians and musicologists. Additionally, the society had a democratic vocation, dispensing education to the general public, emphasizing general discussion as well as extending its interests to the discussion of current events, such as the notorious 'Klimmt Affair', and was involved in the edition and publication of philosophical works. The role of the Philosophical Society as a precursor of the Vienna Circle was acknowledged by Neurath in the Vienna Circle Manifesto and in later writings, and it is through the Society that Bolzano's works were known to the Circle. However, under Reininger's presidency, beginning in 1922, the Philosophical Society underwent a number of modifications, culminating in its annexation to the Kant-Gesellschaft in 1929. Fisette argues that this was due to Reininger's wish to promote a Pan-Germanic philosophy, leading to the defection of the members of the Circle from the Philosophical Society and to the creation of the Circle as a means to preserving an Austrian tradition in philosophy.

Íngrid Vendrell Ferran's chapter 'La Noción de valor en la filosofía de Meinong' examines Meinong's position relative to the notion of value, showing it to be rather more complex than the realist position that has often been attributed to him. Indeed, Meinong's position relative to value has changed and he defended three different successive positions. In *Psychologische Untersuchungen zur Werttheorie,* published in 1894, he defended a dispositionalist position before going on the year afterwards to another position, where values are linked to emotions and desires, and finally proceeding, in 1917, to a realist view. Vendrell Ferran's chapter examines these three different positions and discusses the actuality of the last one for present days philosophical debates over the notion of value. In the first period, Meinong defended a dispositionalist view of values, linking values to *potential* rather than to *actual* value attitudes. Thus, values are linked to capacities for feelings or emotions, which are subjective in the sense that they are necessarily those of an individual. One year later, in his chapter 'Über Werthaltung und Wert', Meinong changed his thesis and proposed that a value lies in the capacity of an object to present itself as

an object of desire. Thus, emotions themselves, and specifically desire, are central to this new theory. Meinong's third and final position was radically different in its realism, severing all relations between values and emotions: Values exist independently of emotions, which are merely the cognitive means of apprehending them. In other words, Meinong proposes an analogy between perception and emotion. The appropriateness of the emotions (and hence the correctness of the detection of a value) depends on whether it is appropriate to the object that triggers it and the cognitive acts of judgment and perception on which it is based. Finally, Vendrell Ferran notes that Meinong's view on values has been revived by contemporary authors, among them Mulligan and Tappolet.

Brian Smith, in 'Austrian and Hungarian Philosophy: On the Logic of Wittgenstein and Pauler', uses the distinction, demonstrated by Mulligan, inside German-speaking philosophy between the philosophy of Northern Germany, idealist and transcendental, and the philosophy of Austria and the South, realist and objectivist, to trace the respective influences of Austrian and German philosophy on Hungarian philosophy and specifically on Pauler's work and his understanding of the *Tractatus*. Hungarian philosophy was mainly under the influence of German philosophy, notably Kant and Hegel, but there were exceptions, notably Palágyi and Pauler. After outlining Pauler's intellectual history, Smith shows that Pauler's logic was heavily influenced by Bolzano and points out that, as the young Wittgenstein, he thought that the totality of truths form a system. Pauler was an adept of a specific version of the correspondence theory of truth, whereby *sophismata* (the ultimate components of truths) have a mirroring relation to things in the world, and proposed an applied logic aimed at the investigation of the logical properties of our thoughts. The parallelisms between Wittgenstein's and Pauler's thinking on logic and meaning are in themselves an indication of Pauler's Austrian heritage. Pauler had a copy of the *Tractatus,* which he annotated, noting influences from both Aristotle and Leibniz, and of which he was mildly critical on Bolzanian grounds.

In Chap. 27 'Winnowing Wittgenstein: What's Worth Salvaging from the Wreck of the *Tractatus*', Peter Simons asks what the *Tractatus* still has to bring to philosophy. Simons notes that though Wittgenstein's later writings have been mostly absorbed by contemporary philosophy, the *Tractatus* has been much criticized, including by Wittgenstein himself in his later years. The *Tractatus* was written in part dissension with Frege's and Russell's philosophy of logic. Here, one main insight of the *Tractatus* is that logical constants are not representational, but, as shown by negation, change truth-conditions. This leads to the notion that propositions do not stand for anything but are merely true or false. Though the *Tractatus* is known for having proposed 'the Picture Theory of Meaning', this is not correct. The notion of depiction used in the *Tractatus* only applies to atomic propositions. A compound proposition is a truth-function of atomic propositions and it is here that the notion of depiction flounders, as a compound proposition can be true or false in many different ways. There are two levels of atomism in the *Tractatus,* first of propositions and second of objects. Though the second has to be rejected, the first, provided suitable modifications, should be taken seriously. A general principle subtending Wittgenstein's view of language–world relation in the *Tractatus* is the Principle of

Harmony, according to which language and the world are in deep harmony. And it is about this harmony that Wittgenstein famously claimed that we cannot speak, despite the fact that it is the main topic of the *Tractatus*. The atomism of propositions meets with difficulty linked to indexicality and tense, but these can be overcome if propositions are considered not from the vantage point of meaning but from the vantage point of truth-making. This puts the onus on a theory of truth-makers.

In 'Wittgenstein, ses prédecesseurs et ses contemporains', Mélika Ouelbani traces influences on Wittgenstein, notably, but not only, Bühler's. Von Wright opposed the 'non-original' *Tractatus* to Wittgenstein's original later writings. Ouelbani takes issue with that view and defends the originality of the young Wittgenstein. Despite its indebtedness to the logicists (Frege and Russell), Wittgenstein's project in the *Tractatus* has the much wider scope of linking language and reality. In Wittgenstein's post-Tractarian philosophy, language and intentions become inseparable from forms of life and activities. In other words, language is an institutional praxis. Philosophy becomes a therapeutic enterprise, a position Carnap and Schlick also adopted. Ouelbani notes that, given that, for Wittgenstein, thought and language are inherently social, the notions of influence and plagiat lose much of their meaning.

Mathieu Marion, in 'Wittgenstein on Heidegger and Cosmic Emotions', disputes current pragmatist readings which lump together the latter Wittgenstein and Heidegger against analytic philosophy. Marion concentrates on Wittgenstein's own comments on Heidegger's chapter, 'What is metaphysics?'. Wittgenstein's comments involve what Sidgwick called 'cosmic emotions', emotions relative to the universe apprehended as a cosmos, and show that he did not see himself as engaged in the same kind of philosophical enterprise as Heidegger is, despite the similarity of their starting points. In that chapter, Heidegger concentrates on the '*Nichts*' (nothing) with a view to reject the principle of non-contradiction and put the '*Nichts*' as the centre of cosmic emotions. While Heidegger speaks of these cosmic emotions, Wittgenstein, without denying their existence, classes them among those things about which we cannot speak. For Heidegger, these emotions, notably anxiety, have a key cognitive role, giving access to metaphysical truths. For Wittgenstein, on the other hand, being things we cannot speak of, they have no cognitive role and fall indeed among those 'philosophical' discourses that a therapeutic use of philosophy should do away with. It is in the rejection of the type of metaphysics represented by Heidegger that Wittgenstein and Carnap, despite their differences, meet.

In 'Le dogme de la vérité selon Parmenide', Jean-Maurice Monnoyer reminds us that Parmenides, in his *Poem,* proposed a theory of truth and a theory of the world. His theory of truth involves assertability. Monnoyer discusses the use of the verb *to be* in Parmenides' *Poem,* noting that it is often substantivized. *To be* is polysemic, having both a *veritative* sense (to be = to be true) and a *modal* sense (to be = to be possible = to be thinkable = to be assertible). Barnes proposes a rather different reading, criticizing the link between truth and factivity that seems implied by Parmenides' view. Monnoyer defends Parmenides' metaphysics as a kind of experiental, rather than empirical metaphysics.

Roberta Lanfredini, in 'The Mind–Body Problem in Husserl and Merleau-Ponty', interests herself in the material dimension of subjectivity, which, though

conscious, is not representational. In Husserl, non-intentional consciousness of this sort is necessarily embodied, and the body can be understood either as matter or as extension. The coexistence of an intentional and a non-intentional consciousness mandates a material a priori. This is manifested by an a priori relation between a flux of experience and a body extension, making the body the focus of the articulation of the phenomenal and the cognitive dimensions of the mind. Though there is a priority of the psychic, it cannot a priori be separated from the body as body scheme, though it can be empirically separated from the material body. An alternative account of phenomenal consciousness can be found in Merleau-Ponty's notion of *flesh,* restoring the materiality of the body. Sensation and sensitivity themselves depend on that biological view of the body, leading to a change of paradigm.

Richard Glauser, in 'Locke and the problem of weakness of the will', turns to Locke's view of akrasia in *Essay concerning Human Understanding*. Glauser begins by noting that Locke's view of akrasia was intellectualist in the sense that it supposed that an agent's attitude towards goods and evils depends on her judgment (i.e. volitions are caused by evaluative judgments). But Locke had to reconcile his denial of freedom of the will with his view of akrasia as something we are responsible for. Between the first and the second editions of the *Essay,* Locke introduced some changes in his moral psychology. The first somewhat tempers his intellectualism, because the will is now causally linked, not to judgment as such, but to uneasiness due to the absence of a (good) object, leading to a desire for it. Volition is directed to action and desire to objects. However, and this is the second modification, an absent good does not necessarily cause uneasiness and desire. And, third, when we have several desires at once, we can choose among the corresponding goods as to which one we want to pursue. This judgment precedes volition and, once made, prevents the subject from performing any other action. Thus, there is a 'suspension of desire' or more precisely the suspension of a desire's power to cause a volition. It is this process that is (improperly) called free will. Indeed, the suspension of desire relates to freedom to think (it allows deliberation), but not freedom to act. The strength of a desire is linked to the strength of the uneasiness that causes it and it is only through the suspension of desire that we can avoid acting on our strongest uneasiness. One consequence is that a *strict contingent action* in Mele's sense (i.e. an action intentionally and freely performed in the face of a negative judgment) is ruled out. Davidson's notion of an *incontinent action* (an action performed intentionally in the face of a potential choice which should favour an alternative action) is also alien to Locke's theory because, according to it, akrasia arises because of discrepant desires and judgments, *regardless of the truth-values of the judgments*. Desires are rationally constrained, in the sense that they will concern attainable, optimal rather than maximal goods. Our desires for these small goods may be strong nevertheless, first because of our passions and second because of our habits. Hence, inappropriately strong desires are explained by misguided judgments, in keeping with Locke's intellectualism. To avoid akrasia, Locke proposes not to weaken our too strong desires, but rather to strengthen our too weak desires through deliberation made possible by suspension of desires. So, on Locke's view, akrasia occurs but in a fairly mild form.

In ‘Bergson, Truth-making and the Retrograde Movement of Truth’, Daniel Schulthess examines the links between Bergson’s notion of truth-making and his concerns about time and duration. Schulthess notes that an account of truth-making should minimally identify truth-bearers, truth-makers and the specific relation between them. On Bergson’s theory of truth-making, truth-bearers are dated acts of judgment, truth-makers are occurrences of things or events, and the constraint on the relation is that truth-bearers should be posterior to truth-makers. Bergson concentrated on singular, historical, contingent, affirmative judgments. Thus, two dates are relevant to truth-making: the date of occurrence of the truth-maker and the date of occurrence of the truth-bearer, the first necessarily preceding the second. A common view, however, is that the date of the judgment can be suppressed, making judgment omnitemporal. This suggests that, in principle, the judgment could occur before the truth-maker did, leading to a ‘retrograde movement of truth’. This retrograde movement of truth overlaps with a retrograde movement of the possible because an antecedently true judgment entails an antecedently possible truth-maker, and vice versa. Bergson rejects this because, according to him, the possible has to be realized at some time (the Principle of Plenitude). This has the consequence that *antecedently true* and *antecedently possible* are convertible. Bergson considers the retrograde movement of the true to be illegitimate on the grounds that the *representative* capacities of the judgment require a temporal relation that is ignored in the retrograde movement of truth. Minimally, an event of the same type as the truth-maker must be available to ground the representation. Thus, providing the necessary representational capacities for the judgment requires simultaneity with truth. However, given that, for Bergson, the possible is constrained by the Principle of Plenitude, though it cannot precede the actual event before it has occurred, it can precede it once it has occurred, allowing a retrograde movement of the possible.

1.4 Conclusion

This variety of topics, all related in some way despite their differences, give a good idea of the breadth of Kevin Mulligan’s interests. This can be best appreciated, however, if the reader knows that the second volume also deals with values, ethics and emotions, epistemology, perception and consciousness, as well as with philosophy of mind and language.

Part I
Metaphysics

Chapter 2
Formal Objects and the Argument from Knowledge

Jessica Leech

Abstract As well as the familiar objects of everyday life, some philosophers talk about objects such as propositions, facts, states of affairs, and so on. Across a number of works, Mulligan describes these as formal objects. Mulligan has offered an 'argument from knowledge' for the existence of certain formal objects, namely, facts or obtaining states of affairs. After presenting this argument from knowledge, the aim of this chapter is to consider two questions: Can this kind of argument be extended to other kinds of formal object, and if so, what does this tell us about the nature of formal objects? It is suggested that, given an identification account of knowledge, the argument can be extended to argue for the existence of things such as values and propositions. Mulligan makes his argument more palatable to the realist by arguing that facts, and other formal objects, are not ontologically fundamental. This, together with the argument from knowledge, suggests that formal objects are to be understood as things which are ontologically dependent upon intentionality and hence on creatures capable of having intentional states and performing intentional acts.

Keywords Apprehension · Fact · Formal object · Identification · Knowledge

2.1 Introduction

In everyday life, we come across all sorts of objects: tables, chairs, trees, sandwiches, and so on. Philosophers often make reference to and talk about other kinds of objects which do not seem so familiar: propositions, facts, states of affairs, properties, classes, concepts, and so on. Across a number of works (Mulligan 2006a, b, 2007), Mulligan describes these as *formal objects* (FOs) and discusses, amongst other things, why we should think that there are such things. In this chapter, my aim is to explore Mulligan's 'argument from knowledge' for the existence of certain FOs, namely, facts or obtaining states of affairs. First, I will present the argument, and consider its strengths and weaknesses. Second, I will consider whether the same kind of argument can be used to argue for the existence of other kinds of FOs.

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Finally, I will consider whether this tells us anything about the nature of FOs, what these things all have in common to be labelled together in this way.

A preliminary clarification is in order. The terms 'proposition', 'state of affairs', and 'fact' are often confused, with different philosophers using them to mean different things in different places. In this chapter, I will understand a *proposition* to be something that can be believed, understood, or thought, composed of concepts, which may or may not be true. I will understand a *state of affairs* to be a complex of worldly things—objects, properties, states, etc.—which may or may not obtain. A *fact* is sometimes taken to be a true proposition, sometimes an obtaining state of affairs, sometimes a *sui generis* entity. Mulligan inclines towards the second option, so in this chapter I will understand a *fact* to be an obtaining state of affairs. Note that this ties facts and states of affairs closely together: Any argument for the existence of facts will serve as an argument for the existence of states of affairs (or at least obtaining ones), and any argument for the existence of states of affairs will go some way to providing an argument for the existence of facts (as long as the argument yields some *obtaining* states of affairs).

2.2 Other Arguments for Formal Objects

One of the most well-known arguments for the existence of facts is the *truthmaker argument* (Armstrong 2004, 1997). In brief, the argument runs something like this:

1. There are truths.
2. For any given truth, there must be something that makes it true, i.e. a truthmaker.
3. The best candidate for playing the role of a truthmaker is a fact.
4. Therefore, there are facts.

As long as we agree that there are some things which are true, we should agree that there are facts to make those things true.

In fact, I have overstated the argument. As it stands, this argument includes a principle of *truthmaker maximalism,* i.e. that *every* truth has a truthmaker. This is a highly controversial principle for a number of reasons. For example, there are certain truths which it is not clear require their own truthmaker, such as necessary truths, logical truths, or true conditionals. There is also the worry that this strong truthmaker principle will yield an overabundance of facts, clogging up our ontology. If our interest is only in arguing that some facts exist, then the argument would achieve this just as well by taking a weaker premise, that for *some* truths, there must be something to make them true. This more restricted principle allows us to ignore the more controversial cases, and promises to yield fewer facts into our ontology.

I am not going to consider the truthmaker argument in detail in this chapter. But it is worth noting that as an argument for the existence of *FOs,* it may not be of much help. The argument is premised on there being *truths*. One must therefore be able to say *what those truths are,* i.e. what the truth-bearers are. If you think

they are something like propositions, then the existence of facts, one kind of FO, is premised on the existence of another kind of FO, propositions. This is not a problem for someone whose interest is only in states of affairs and facts, who already accepts propositions. But it fails to tell us anything interesting about how we can be sure that there are any FOs. We only learn that (perhaps) the existence of one kind of FO entails the existence of another. Furthermore, there are going to be other objections to the argument. For example, there are candidates other than FOs to play the role of truth-bearers, such as concrete utterances, beliefs, thoughts understood as mental entities, and so forth.

The truthmaker argument looks at some things in the world, truth-bearers, and asks why they have a certain (formal) property, truth. Mulligan's strategy is different. He asks instead what the nature of *intentionality* can tell us about FOs. The distinctive feature of intentional states (ISs), acts, or activities is that they are supposed to be *about* something. Examples include, but are not limited to, belief, judgment, knowledge, desire, fear, hate, and admiration. There is a division in ISs and acts between those that can 'miss their mark' or get things wrong, and those that are always correct. So, for example, beliefs can turn out to be false, and we can fear things which pose no threat, but something like *knowledge* is different. If we know that *p,* then *p* is true. We can never turn out to have 'false knowledge'; that would be, for example, a false belief that we know that *p,* or something similar, not *knowledge*. There are two points to be highlighted here. First, Mulligan argues that ISs such as belief do not give us a reason to believe in facts or states of affairs. Second, that an account of ISs and activities that can miss their mark in terms of *correctness conditions* relies on a prior commitment to the existence of FOs which itself needs justification.

First, then, can the nature of ISs which can go wrong provide an argument for the existence of FOs? Take, for example, belief. One can give an account of how belief can miss its mark in terms of a satisfaction condition:

> A simplified version of Searle's account of the satisfaction conditions for belief is that a belief that p is satisfied only if p. (Mulligan 2007, p. 207)

This makes no appeal to FOs. However, an alternative approach is to give an account of how belief can miss its mark in terms of a correctness condition. It looks as though correctness conditions for ISs do make reference to FOs. For example:

> If *S* believes that *p*, then *S* correctly believes that *p* only if the proposition that *p* is true/the state of affairs that *p* obtains/the fact that *p* exists.

This looks promising, but one can object that the reference to FOs here is superfluous. We can simply say:

> If *S* believes that *p*, then *S* correctly believes that *p* only if *p*.

Independent of other philosophical reasons, there is no need to add to this simple schema. For example, the following instance is well formed:

> If Sam believes that Sally is silly, then Sam correctly believes that Sally is silly only if Sally is silly.

Reference to FOs in an account of non-factive ISs and acts can be eliminated, at least in the case of belief and judgment (see Mulligan (2007, § 2)). It does not look like an account of this kind of intentionality is going to justify a belief in the existence of FOs.

The second point is that not only does an account of these kinds of ISs and acts not provide an argument for the existence of FOs but also such an account in terms of correctness conditions seems instead to make an appeal to the existence of FOs. Here are some of Mulligan's examples of putative correctness conditions for some ISs and acts: psychological reports on the left, putative correctness conditions on the right:

x desires to F	x ought to F
x values y	y is valuable
x admires y	y is admirable
x regrets that p	It is regrettable that p
x prefers y to z	y is better than z
x judges (believes) that p	The state of affairs that p obtains
x judges (believes) that p	The proposition that p is true

(See Mulligan 2007, p. 207)

Each of these correctness conditions 'refer to formal objects (propositions, states of affairs) or are dominated by formal predicates or functors (truth, obtaining, value, ought, probability)' (Mulligan, 2007, p. 209). Hence, one objection that can be raised against this approach by the sceptic about FOs, standardly the nominalist, is to claim that FOs and formal properties do not exist, and so the approach must fail:

So what now?

> How should a friend of correctness conditions react to the many different objections I lumped together under the claim that correctness conditions are problematic? To the objections that there are no propositions or states of affairs, no values and no norms?… To the claim that correctness conditions for judgment and belief can be given without mentioning states of affairs or propositions? (Mulligan 2007, p. 212)

Mulligan proposes to consider an account of the other kind of intentionality, the kind that is always correct. The paradigm case of this kind of intentionality is *knowledge:*

> A philosopher who intends to provide a philosophy of intentionality and thinks that an account of the intentionality of attitudes, acts and states which can miss their mark can be given in terms of correctness conditions must in any case provide a complementary account of the intentionality of knowledge. Suppose that a plausible account of the intentionality of knowledge could be shown to entail that there are facts, values, norms, probabilities etc. Were that the case our philosopher would be able to kill two birds with one stone. He would have an account of the two main types of intentionality and his account of the intentionality of knowledge would give him the very best of reasons for holding that correctness conditions are unproblematic. (Mulligan 2007, p. 212)

2.3 The Argument from Knowledge

First, we need to set in place two distinctions between different kinds of knowledge. Mulligan notes that knowledge can be *episodic* or *non-episodic, propositional* or *non-propositional*. Our familiar standard *knowledge that p* is classed as non-episodic propositional knowledge. It is a constant state or disposition of knowing that *p*. There is also the episodic and propositional *coming to know that p,* which is properly expressed by the German phrase 'erkennen, dass *p*', and less properly expressed by the English phrase 'to apprehend that *p*'. We can understand apprehension that *p* as marking the beginning of knowledge that *p*.[1] Non-episodic non-propositional knowledge is acquaintance with an object, i.e. knowing *x*. Episodic non-propositional knowledge is becoming acquainted with an object, and again can be understood as marking the beginning of the non-episodic state of being acquainted with *x*.

The argument from knowledge appears in at least two places, Mulligan (2006b) and Mulligan (2007), with some slight differences, but this is what I take to be the general form:

1. There is non-episodic, propositional knowledge, i.e. *knowledge that p*.
2. The beginning of knowledge that *p* is marked by episodic, propositional knowledge.
3. Therefore, there is episodic, propositional knowledge, i.e. *apprehension that p*.
4. The best account of apprehension that *p* includes *identification* of things.
5. The best candidates for the things which are identified in apprehension that *p* are FOs.
6. Therefore, there are FOs.

The most important step to understand is the introduction of *identification*. Mulligan begins by discussing the non-propositional case, of coming to know an object. As with the propositional case, episodic knowledge is taken to mark the beginning of non-episodic knowledge. So, what account should be given of the episodic case? Take the example of coming to know an object through seeing the object. Is it sufficient for the object merely to appear in one's visual field? No. Just because my eye is cast over a scene including a particular rock, *R*, it does not mean that I become acquainted with *R*. Most importantly, *I would not know R if I saw it again*. There has to be more to knowing something (i.e. knowing some thing) than having come across it. In coming to know the thing, one must *identify* it. Continuing knowledge of the thing can then be understood as at least the ability to *reidentify* the object. The beginning of being able to reidentify an object is the initial identification of it:

[1] One might object that in the case of innate knowledge that *p,* there is no coming to know that *p,* one always knows it. If one finds this point compelling, the following discussion can simply be restricted to cover cases of knowledge that *p* which do begin with episodic knowledge. As long as there are such cases, then the argument can still run through.

> If x comes to be visually acquainted with y, then x sees y at t_1 and then at t_2 and sees y at t_2 *as the same object*. (Mulligan 2007, p. 215)

In cognitive science, this ability to identify and track objects is known as *object constancy*. Mulligan tells us a little more about identification:

> Identification is a mental act which has correctness conditions: x correctly identifies y and z only if y = z. Such identification may but need not take the form of a judgement. Simple seeing has no correctness conditions; it is an intentional relation we stand in to things and processes. Coming to be visually acquainted with something has no correctness conditions either. But it involves identification, which does have correctness conditions. (Mulligan 2007, p. 215)

To clarify then: Visual acquaintance is not identification, but it does involve identification. Visual acquaintance does not have correctness conditions—as a kind of knowledge, it is one of the kinds of intentionality which cannot get things wrong—but identification, which is involved in acquaintance, does have correctness conditions. Sometimes identification is a judgment of identity, but it need not be. An additional detail is that Mulligan claims that what we 'simply see' in the visual field and the objects of visual acquaintance are different.

> What we simply see are substances, states, processes and events. Episodic visual acquaintance is acquaintance with objects and properties. It is based on a relation to substances, states, processes and events. (Mulligan 2007, p. 215)

This point will become important later on.

So, acquaintance of an object involves identification. Mulligan's suggestion is that apprehension that *p* analogously involves identification. When we come to (propositionally) know something, we identify something. Now, we might try to present this kind of account of knowledge without making reference to any FO, as in the case of the account of belief above:

> *S* apprehends that *p* only if *S* 'sees' *p* and *S* 'sees' *q* and *S* correctly identifies *p* and *q*.

(Where $p = q$.) The problem is that this account is ill formed. The letters '*p*' and '*q*' are placeholders for a sentence expressing a proposition, they are not names of things that could be identified. See what happens if we flesh this out with an example:

> Sam apprehends that Sally is silly only if Sam 'sees' Sally is silly and Sam 'sees' Sally is silly and Sam correctly identifies Sally is silly and Sally is silly.

Things are just as bad if we try to frame the identification between that-clauses, i.e.

> Sam apprehends that Sally is silly only if Sam 'sees' that Sally is silly and Sam 'sees' that Sally is silly and Sam correctly identifies that Sally is silly and that Sally is silly.

To properly be able to express identity, we need to add a locution, such as 'the proposition (that)' or 'the state of affairs (that)' or 'the fact (that)':

> *S* apprehends that *p* only if *S* 'sees' the fact that *p* and *S* 'sees' the fact that *q* and *S* correctly identifies the fact that *p* and the fact that *q*.

(Where the fact that p = the fact that q.) This account of apprehension that p requires that someone who apprehends that p, comes to know that p, makes an identification of a fact. This might be across time (as with the visual acquaintance example), i.e.

> S apprehends that p only if S 'sees' the fact that p at t_1 and S 'sees' the fact that p again at t_2 and S correctly identifies the fact that p at t_2 as the same fact.

This might also be through different media, i.e. S correctly identifies the fact S has just seen with the fact that S is wondering about:

> S apprehends that p only if S 'sees' the fact that p and S 'wonders about' the fact that p and S correctly identifies the fact that p about which S is wondering as the same fact.

At first glance, this view might seem strange, but in fact, it seems to account for the 'eureka' moment we have when we come to know something new. Sometimes we find ourselves thinking about facts, but not knowing which fact we are thinking about. For example, I might be wondering what the capital city of Oman is. I am representing the fact descriptively, but I am not yet able to identify the fact. I then google 'capital city Oman' and read the fact that Muscat is the capital city of Oman. 'Aha!', I say to myself, '*that* is the fact I was thinking about'. I have identified the fact I was thinking about with the fact I just read. I have apprehended the fact that Muscat is the capital city of Oman. It is perhaps worth noting that other going accounts of knowledge do not really seem to account for the phenomenology of coming to know something. For example, if I form a belief that tracks the truth, it is not clear how this would give me a 'eureka' feeling.

Clarifying the notion of identification should make it clear how the argument from knowledge works. We assume that there is propositional knowledge. Either we can simply assume that there is apprehension that p or we can take an extra step and assume that there is knowledge that p, and argue that knowledge that p requires apprehension that p to get started. Then, the best account of apprehension that p, it is argued, involves identification. But any formulation of this view is ill-formed unless reference is made to FOs. Reference to FOs is taken to be ontologically committing. So on the assumption that there is propositional knowledge, we conclude that there exist FOs. What those FOs are will depend upon whether you think the best candidates for knowledge are true propositions, obtaining states of affairs, or facts. This looks a lot like the question above concerning whether facts are true propositions, obtaining states of affairs, or *sui generis*. One could leave this open, but assuming that facts are obtaining states of affairs, this argument can be taken to conclude that states of affairs exist.

One objection which Mulligan anticipates to the identification theory of knowledge is the following.

> The identification theory of apprehension has implications which not all philosophers will find equally acceptable. For example, that to apprehend that p by inferring validly from known premises to p involves going through the inference at least twice. And, another example, that coming to know that p through testimony requires a double-take. (Mulligan 2007, p. 216)

However, Mulligan is unfair to his own view here. As I understand it, this view of apprehension requires that two presentations of a fact be identified as the same fact. In Mulligan (2007), the view is presented in terms of facts seen at different times, i.e.

> Sam identifies the fact that Maria is sad, which he perceives at t_1, and the fact that Maria is sad, which he perceives at t_2. (2007, p. 216)

However, in another paper, the view is presented simply in terms of identification between facts presented differently, i.e.

> x identifies the obtaining state of affairs that Sam is smiling, *which x sees*, with the obtaining state of affairs that Sam is smiling, *which x represents*. (2006b, p. 39, my emphasis)

The requirement that we go through the same procedure *twice* to apprehend that *p* in certain cases, such as in proof or testimony, seems only to apply if we adhere to the more restrictive account whereby facts must be identified *across time*. If apprehension can also occur when facts are identified across different media, then we can avoid the unacceptable implications. For example, in the case of inferring validly from known premises to *p,* apprehension might involve identification of the fact that *p,* which occurs as the conclusion of the inference, as the fact that *p,* which was represented as a question in the example sheet. There is no need to do the work twice. Likewise, in the case of testimony, apprehension might involve identification of the fact that *p,* to which a reliable witness testified, as the fact that *p,* which the policeman represented as potentially important. No double takes. Not only does this more permissive understanding of the view avoid difficult implications but this is also the view which I have argued gets the phenomenology of learning right.

Another objection anticipated by Mulligan is that the realist metaphysician will not be interested in an argument from knowledge:

> Although no ontology should be incompatible with epistemology, a realist metaphysician will not attach much importance to an argument for facts from knowledge or from any other mind-dependent phenomenon. (Mulligan 2006b, p. 31)

The realist metaphysician is interested in the fundamental furniture of the world, say, and we should not expect what we know and how we come to know it to tell us about fundamental reality—we might miss out a part of reality which is unknowable, or which is distorted by our knowing it. Mulligan's response is to argue that facts are not ontologically fundamental. If they are not fundamental, then the realist cannot complain that an argument based on knowledge is inappropriate insofar as it is inappropriate for discovering the nature of fundamental reality. Mulligan also notes that if one does not take facts to be ontologically fundamental, then this takes some of the bite out of accepting truthmaker maximalism (cf. Sect. 2.2). If facts are not ontologically fundamental, then one cannot complain that the principle that every truth has a fact for a truthmaker clogs up one's (fundamental) ontology.

I am not going to assess Mulligan's arguments for facts being non-fundamental here. Rather, I want to draw attention to a similarity between this view and the view about visual acquaintance which will become important later. Recall, Mulligan takes the things in the world which impinge on our (visual) senses to be substances,

states, processes, and events, but he takes the things with which we may become visually acquainted to be objects and properties. Likewise, although we apprehend *facts,* these are not ontologically fundamental. What is (at least more) ontologically fundamental (than facts) seems to be objects (Sam), substances (Sam), events (Sam's jump), states (Sam's sadness), and so on:

> …the following are all plausible:
> 47. Sam makes the state of affairs that Sam exists obtain
> 48. Sam's sadness makes the state of affairs that Sam is sad obtain
> 49. Sam's jump makes the state of affairs that Sam jumps obtain
> 50. Sam's jump over the fence makes the state of affairs that Sam jumps over the fence obtain
> (Mulligan 2006b, p. 45)

Just as in the case of visual acquaintance, the things we identify (objects and properties) are less fundamental than whatever we are related to in order to elicit this response (processes, states, etc.), so in the case of propositional apprehension, the things we identify (facts/obtaining states of affairs) are less fundamental than whatever we are related to in order to elicit this response (objects? states? etc.). I will return to this point and its consequences for the nature of FOs below.

2.4 Extending the Argument

So far, I have presented Mulligan's argument from knowledge for the existence of one kind of FO, namely facts (obtaining states of affairs). What I want to consider now is whether this kind of argument, from the nature of a kind of IS to the existence of a kind of FO, can be extended to FOs other than facts. If it can, what does this tell us about FOs?

This is the rough general form of the argument from knowledge:

1. There is some (factive) IS.
2. In order for IS to occur, it must begin with a related (factive) intentional episode (IE).
3. Therefore, there is IE (from 1, 2).
4. The best account of IE involves the identification of some things.
5. The best candidates for identification in IE are a certain kind of FO.
6. Therefore, there are FOs (from 3, 4, 5).

An argument for the existence of facts or (obtaining) states of affairs took IS to be non-episodic propositional knowledge that *p,* IE to be episodic propositional knowledge, or apprehension that *p,* and FO to be facts or obtaining states of affairs. Can we flesh out this general argument form to yield arguments for the existence of other kinds of FOs?

Mulligan (2007) goes some way towards doing so in his discussion of knowledge of value. Mulligan does not give us an analogous argument for the existence of value, but he does give us an analogous account of knowledge of value. In knowledge

of value, we encounter or 'feel' a value, and we come to know that value when we are able to identify it with (as) another value felt elsewhere:

> "Feel" in the sentence "Maria felt the injustice of the situation" is veridical. If Maria felt the injustice of the situation, then the situation was unjust. If she is struck by the beauty of the building, it is beautiful. Maria's indignation is a reaction either to a felt disvalue, the injustice of the situation or to a merely apparently felt value. In the latter case she is the victim of an illusion. Her admiration of the elegance of Giorgio's gait is a reaction to a felt, positive value or it is a reaction to an apparently felt value. (2007, p. 224)

> Is feeling value an exception to the principle that all knowledge involves identification? No…. Aesthetic experience is perhaps the clearest example of the phenomenon of continuously feeling the same value as the same under different modes of presentation. Just as we distinguished between simple seeing and episodic visual acquaintance, so too, we should distinguish between (a) feeling value which is no form of knowledge but rather the analogue of simple seeing and perception and (b) the case where feeling value does constitute knowledge because it involves identification. (2007, p. 224)

Maria knows injustice in seeing the situation only if she not only minimally experienced the injustice but also felt and identified it. Perhaps Maria saw some injustice last week, or perhaps Maria read about injustice in her politics class. She is now properly acquainted with that value. Mulligan concludes the discussion with the following general view:

> If x favours y, then x feels the value of y or x merely seems to feel the value of y or x believes y to be valuable. (2007)

How could this view be used in an argument for the existence of values as FOs? With only a little deviation from the general form, such an argument might go something like this:

1. It is sometimes the case that *x* values *y,* for some subject *x,* and some entity *y*.
2. If *x* values *y,* then *x* feels the value of *y* or *x* merely seems to feel the value of *y* or *x* believes *y* to be valuable.
3. Sometimes, *x* feels the value of *y* (FV).
4. The best account of FV involves the identification of some things.
5. The best candidates for identification in FV are values.
6. Therefore, there are values.

The crucial factive IS here is *feeling the value of y*. Then, it is argued, the best account of this involves identification of values.

The disjunction in (2) opens up the argument to a challenge. What if all cases of valuing are covered by mere feeling of value or mere belief of value? The argument assumes, in other words, that the correctness conditions of valuing are at least sometimes met, i.e. in some cases where *x* values *y, y* is indeed valuable, and *x* is able to feel that value—*y* is not *merely* seemingly valuable or *merely* believed to be valuable. If this assumption turned out to be false, then one would need to provide some kind of error theory: Why do we value things when we are never correct in doing so? Assuming that we are sometimes correct in our valuing avoids having to answer this kind of question.

Furthermore, note that at this stage, the existence of value has not yet been established, only that valuing is sometimes correct. What makes a valuation correct is still open. This is addressed in the later stages of the argument, in claiming that correct valuing involves feeling a value, and in making the same kind of distinction we made in the case of simple seeing versus visual acquaintance. It is not enough for a value to appear unacknowledged in the subject's sphere of experience for a value to be felt, the value must be identified.

To get into a deep analysis of this particular view of knowledge of value would involve too great a digression. Instead, I want to sketch some other potential arguments for FOs. First, what about the case *of knowing one's own mind*? If I know anything at all, surely I know the contents of my own thoughts?[2] The following principle seems plausible:

(In at least some cases) if *x* thinks that *p,* then *x* knows the content of that thought.[3]

But what is the definite description 'the content of that thought' referring to? An ill-formed version of the principle would be:

(In at least some cases) if *x* thinks that *p,* then *x* knows that *p*.

If we read '*x* knows that *p*' as meaning that *x* has propositional knowledge that *p,* then this is wrong. Just thinking a thought that *p* does not imply knowledge that *p*! The knowledge here is intended to be non-propositional: acquaintance of a thing, a content, not a fact. But read this way, the principle is ill-formed. Mulligan often endorses the claim that, in such contexts, the expression 'that *p*' is not a well-formed referring expression. Sometimes such an expression will count as well-formed, for example, in cases such as 'That Sam is silly is true'. But in contexts such as 'It is true that *p*' or 'Sam knows that *p*', the constituent expression 'that *p*' is not a well-formed referring expression. In order to make the principle work, a qualifying phrase needs to be added, such as in 'the fact that *p*' or 'the proposition that *p*'. Of the candidates for playing this role, a proposition is arguably the most appropriate kind of thing for '*p*' to be. So we end up with:

(In at least some cases) if *x* thinks that *p,* then *x* knows the proposition that *p*.

Once we have knowledge of an object, then the same kind of account can be run. Such knowledge requires identification, and the best candidate here is a FO, a proposition.

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[2] Some externalists about content might disagree. For example, they might argue that if I was unwittingly on twin Earth and I thought to myself 'This is a nice glass of water', I would not know that the content of my thought was in fact 'This is a nice glass of XYZ'. If one finds these arguments persuasive, the following can be restricted to thoughts which are not about natural kinds, or other things vulnerable to the externalist view.

[3] Note here, 'thinking that *p*' is just meant as entertaining the thought that *p,* not as believing that *p*.

Let us translate this line of reasoning into a version of the argument from knowledge:

1. There is some (factive) IS: knowledge of the content of one's own thoughts (KT).
2. In order for KT to occur, it must begin with a related (factive) IE (EKT).
3. Therefore, there is EKT (from 1, 2).
4. The best account of EKT involves the identification of some things.
5. The best candidates for identification in EKT are a certain kind of FO: propositions.
6. Therefore, there are propositions (from 3, 4, 5).

This leaves open what propositions *are*. One may go on to give further arguments, for example, for the claim that the things we think must be able to be shared and thought by others (see, e.g. Frege 1956).

The general strategy here is to take as one's factive IS a certain kind of knowledge. Given an identification account of knowledge, the next step is to consider whether FOs might be involved in the identification in this kind of knowledge, and if so, what kind. I have suggested that arguments could be developed for the claims that knowledge of value involves identification of values, and that knowledge of one's own thoughts involves identification of propositions. Other prospects for these arguments might include: knowledge of similarity and identification of properties, mathematical knowledge and identification of mathematical objects such as sets and numbers, grammatical knowledge and identification of grammatical structures, semantic knowledge (knowledge of the meanings of words) and identification of the meanings of words, and so on. To properly assess this strategy would involve a wholesale evaluation of this kind of theory of knowledge and the notion of identification. This is a task for elsewhere. My present aim is to consider how this account can be used and extended in the context of the argument from knowledge.

2.5 The Nature of Formal Objects

So far, I have looked at Mulligan's argument from knowledge for the existence of facts, and sketched how it might be extended to provide arguments for the existence of other kinds of FOs. Can this line of investigation tell us any more about what FOs are? There are two salient points to bear in mind. *First,* we have arguments from the existence of *intentionality* to the existence of these special objects. *Second,* the realist objection to this kind of argument was addressed by Mulligan (in the case of facts) by arguing that those FOs are not fundamental.

What seems to be emerging is the following picture. The fundamental furniture of the world is made up of substances, states, processes, and events. But what we are able to have knowledge of are other things, such as properties, values, propositions and facts, or states of affairs. Our best reason for believing that these latter things exist comes from knowledge and intentionality: The best account

of knowledge requires the existence of these FOs. A natural question to ask is: Why does an account of intentionality yield arguments for the existence of FOs, especially when this would not be appropriate in the case of ontologically fundamental entities? The natural conclusion to draw here is that FOs are not only not ontologically fundamental but also this is explained if we understand FOs as being dependent upon ISs.

If there were no visual perceivers, would there be objects, or only substances and states, etc.? If there were no epistemic agents, would there be facts? If there were no thinkers, would there be propositions? Mulligan likens the status of FOs to social entities:

> According to such a metaphysician, there are propositions, facts, properties and relations but these entities are not ontologically basic. After all, there are social entities but social entities are not ontologically fundamental. (Mulligan 2006b, p. 44)

There exist entities such as 1-euro coins, football teams, nuclear families, public limited companies, and so on. But these are not the kinds of things which make up the fundamental furniture of the world. Arguably, social entities such as money, teams, families, and businesses ontologically depend upon some kind of creatures capable of social interaction. The view which one can take from Mulligan's work on FOs and the argument from knowledge is that there do exist FOs, such as facts and values, but that these are ontologically dependent entities. Furthermore, they depend upon certain forms of intentionality, and hence creatures capable of intentionality.

Is this line of thought pulling us into dangerously antirealist waters? This depends upon how you understand what realism is. What does it take to be 'realist' about *F*s? Does one need to count *F*s as ontologically fundamental? This looks to be a particularly strong form of realism. A more moderate realist about *F*s will merely require that *F*s exist, taking the view that lots of things exist without being ontologically fundamental. Yes, there may be relations of ontological dependence between things, and those will be very interesting to the metaphysician, but just because something is not ontologically fundamental is no reason to say it is not real. These are deep issues which I cannot explore here, but I will take it to be a plausible version of realism about *F*s that *F*s can be counted as real if they are ontologically dependent on something, as long as it is correct to say that there are *F*s.

One might then worry about the kinds of things *F*s are ontologically dependent *on*. For example, one might get nervous if *F*s depend upon anything resembling a mental entity. Should this count as antirealism about *F*s? Well, as long as *F*s still *exist,* and are not mere figments of the imagination or the like, then it would seem not. There is a difference between, for example, saying that an *F* only exists as long as it is currently being thought about, and saying that if there were no thinkers, there would be no *F*s. The conclusion of the argument from knowledge is that *there are facts*. The proposed interpretation of the details of the view is that facts ontologically depend upon creatures capable of intentionality. This is not to say that a fact does not exist if no one currently knows it. This kind of view can then explain (a) why facts are not ontologically fundamental—it is because they ontologically

depend upon intentional creatures—and (b) why the argument from knowledge is successful.

Mulligan (2006b) leaves us with the following picture of the different levels of reality, with the ontological level being ontologically fundamental:

> *Logical level* propositions, concepts
> *Logico-ontological level* objects, properties, relations, facts
> *Ontological level* space-time, things, states, processes, and kinds thereof.
> (2006b, p. 44)

He asks the questions: 'How are the ontologically fundamental and the ontologically non-fundamental related to one another? How is the logico-ontological level related to the ontological level?' He suggests, for example, that states of affairs depend in some way on objects, for example that Sam makes the state of affairs that Sam exists obtain (see above). My proposal helps to answer these questions. One might say that the higher levels depend upon the lower levels, but only in the presence of creatures capable of intentionality. So, for example, that there is intentionality is a condition on the Atlantic Ocean making *the state of affairs that the Atlantic Ocean exists* obtain. Without intentional creatures, there would be things, states, processes, etc.—there would be the Atlantic Ocean—but there would be no logical or logico-ontological entities to be known, seen, understood, thought, recognized, and so on—there would be no state of affairs that the Atlantic Ocean exists.

2.6 Conclusion

In various places, Mulligan has discussed the argument from knowledge for the existence of facts, a certain kind of FO. In this chapter, I have tried to consider two questions: Can this kind of argument be extended to other kinds of FO, and if so, what does this tell us about the nature of FOs? I have sketched how, given an identification account of knowledge, the argument can be extended to argue for the existence of things such as values and propositions. Mulligan makes his argument more palatable to the realist by arguing that facts and other FOs are not ontologically fundamental. This, together with the argument from knowledge, suggests that FOs are to be understood as things that are ontologically dependent upon intentionality and hence on creatures capable of having ISs and performing intentional acts.

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Chapter 3
The Naming of Facts and the Methodology of Language-Based Metaphysics

Arianna Betti

Why, on what lines will you look, Socrates, for a thing of whose nature
you know nothing at all?
Plato, Meno 80de
The naming of cats is a difficult matter
It isn't just one of your holiday games
T.S. Eliot, Old Possum's Book of Practical Cats, 1939

Abstract According to Mulligan and Correia's entry on facts in the Stanford Encyclopedia of Philosophy, 'any philosophy of facts owes us an account of the form of such expressions as "the fact that Sam is sad"'. They also suggest that expressions of the form 'the fact that *p*' have the form of definite descriptions, and that one possible account of such expressions as definite descriptions is the one given by Hochberg. According to Hochberg, 'the fact that *p*' is analysed as 'the fact that contains *a* as a term and *F* as an attribute and that is of the form φ*x* exists'. Why should we ask that any philosophy of facts be equipped with names for facts (or, more neutrally, with ways to refer to facts)? A descriptive metaphysician accepting facts might care about the naming of facts; but I do not see why a revisionary metaphysician should: I do not see whether a revisionary metaphysician accepting facts should care even as to whether it is at all possible to name them. A fortiori, for a revisionary metaphysician, there does not seem to be any need for the expression 'the fact that *p*' to come out as a definite description. So, it seems that the only philosophers for whom Hochberg's analysis is relevant are those who think that linguistic analyses of that kind can be used in support of a philosophy of facts independently of theoretical considerations. But this, I argue, is misguided: Since it presupposes a specific philosophy of facts from the start, Hochberg's analysis cannot be used in support of that very philosophy or of any other philosophy of facts.

Keywords Fact · Descriptive metaphysics · Revisionary metaphysics · Proposition · That-clauses

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Dear Kevin,

As you and I and many others well know, some metaphysicians consider analysing how we talk about entities important for arguing for or against including such entities in our catalogue of the world. Particularly, it is often argued that some specific kinds of expressions *name* or *singularly refer* to certain categories of entities. For instance, some defenders of facts insist that we have a way to name facts in this sense, e.g. they say that expressions like 'the fact that *p*' function as definite descriptions for the entities they allegedly refer to, namely specific facts.

You agree that 'the fact that *p*' is an especially interesting expression for any philosopher of facts. As you write:

> Any philosophy of facts owes us an account of the form of such expressions as "the fact that Sam is sad." (Lowe 1998) (Mulligan and Correia 2008, Sect. 1)

There are two things that puzzle me about this statement. First, once you seemed to accept tropes and deny both universals and facts. Now, you seem to do the opposite (though your acceptance of either facts or universals is not to be read off from that statement). I do not know exactly why you accept facts. I ask because I am critical of facts, although in what follows, I will not give any sustained arguments against them (what I have to say against facts is contained in Betti 2014a).

Second, I do not see why it should be necessary for *any* philosophy of facts to provide an account of the form of the expression 'the fact that *p*', nor do I see even that it would be *important* for such a philosophy to do so. Those who accept facts and take up an attitude that usually goes under the label of *revisionary* metaphysics, I think, would not find having such an account important. Revisionary metaphysics, as is well known, contrasts with *descriptive* metaphysics:

> Descriptive metaphysics is content to describe the actual structure of our thought about the world, revisionary metaphysics is concerned to produce a better structure. (Strawson 1959, p. 9)

So, I see why a descriptive metaphysician accepting facts should care about the naming of facts; but I do not see why a revisionary metaphysician should: I do not see whether a revisionary metaphysician accepting facts should care even as to whether it is at all *possible* to name them. So, I am not sure why you think it is so important for the revisionary metaphysician to have an account of the expression 'the fact that *p*'. Unless, of course, yours is not a neutral statement but a statement made from the perspective of a descriptive metaphysician. But are you one of them? I am also not sure why you attach so much importance to Herbert Hochberg's account of the expression 'the fact that *p*' as a definite description. Again, I do not quite understand why his account would be of use to revisionary metaphysicians.

In what follows, I will explain my reasons for bringing up the point I just mentioned. I shall also, moving from the debate on the naming of facts, offer a critical examination of the methodology of metaphysics that relies on language-based arguments. My criticism is that this kind of metaphysics often places the wrong

kind of methodological emphasis on language data, and thus gives a distorted image of both the workings and goals of this methodology. And then I will ask you: Do you agree?

Here is what I will do. In Sect. 1, I introduce two kinds of facts, compositional and propositional: The first is tendentially defended by revisionary metaphysicians, the second by descriptive ones. In Sect. 2, I briefly introduce an argument which I reconstruct as underlying the descriptive reasoning which defends facts drawing from the way we talk about them: I call it the Argument from Nominal Reference. This is an argument I distill from representative descriptive positions such as Kit Fine's, in which the naming of facts by means of 'the fact that *p*' taken to be a singular term is an important presupposition. I then proceed to discuss Hochberg's analysis of 'the fact that *p*' as a definite description. My main criticism regards the circumstance that this analysis destroys the prima facie syntax of 'the fact that *p*' in natural language, that from the very start it builds in theoretical presuppositions as to what facts are, and that thus the descriptive metaphysician should consider it a useless tool. I say that for revisionary metaphysicians, by contrast, such an analysis is not particularly relevant, since no revisionary metaphysician should put much value in how we talk about facts: The only interesting question here is whether we should accept facts as the best candidates to play certain metaphysical roles. And the playing of such roles, in a revisionary framework, must be argued for by means other than linguistic analysis. In Sect. 3, I go on to critique the methodology of ordinary language philosophy, maintaining that, far from being based on empirical findings of language use, the choice of linguistic examples made by natural language philosophers to support philosophical points about the nature of facts is question-begging; actually, it can be shown that 'facts' in natural language does not mean *philosophers*' facts. In Sect. 4, I argue that the only possible position with respect to the notion of reference to facts is the position according to which facts are taken *by stipulation* to be the *semantic value* of certain expressions. It is possible to defend this position, however, only if we manage to show on the basis of arguments other than linguistic ones that we have good reasons to acknowledge facts. (I doubt that we can manage to show that, but never mind this here.) In doing all this, I will touch upon the notion of ontological commitment, natural language paraphrases in metaphysics and the role of the translation into first-order classical predicate calculus, and the reliability of evidence given by the kind, quality and scope of language-data as used in the descriptive metaphysicians' practice.

3.1 How Many (Conceptions of) Facts?

There are two conceptions of facts: compositional and propositional.[1]

[1] I characterise facts and their identity criteria in detail in Chaps. 1, 2 and 3 (compositional) and Chaps. 4, 5 and 6 (propositional) of Betti 2014a.

Compositional facts (key figure: David Armstrong)	Propositional facts (key figure: G. E. Moore)
are	
(1) *Complex* objects with a *fixed* number of constituents (in the simplest case minimally two and maximally three) which they comprehend in their *reticulation*	*Not composed of the objects* they are 'about'
(2) *Categorically heterogeneous* (3) *Non-mereologically composed* (4) *Ontologically heterogeneous* (5) Structured in a *formal* way	*Unstructured*
(6) *Part of the furniture of the world*	*Not part of the furniture of the world* (and they are essentially ideal entities, i.e. non-causal)
(7) *Semantically idle*	Not statements, or propositions, though they are as fine-grained as propositions, and, like propositions, they are *about something*
Identity criterion: two facts are identical iff	
(*Empirical*) They are necessarily equivalent, if they necessarily coexist (*Compositional*) They have the same constituents in the same arrangement	(*Quasi-structural*) The propositions to which they correspond are identical

One interesting question that emerges from this classification is whether propositional facts (Fine 1982's terminology) are the same as the 'non-compositional facts' of philosophers like Plantinga, Pollock, and Barwise. Contemporary reference works (including yours and Fabrice's, Mulligan and Correia 2008) ignore propositional facts, leaving it unclear whether we should consider non-compositional facts a variant of the compositional ones after all or, whether instead, they are an unfortunate mix of compositional and propositional facts. I am inclined toward the unfortunate mix reading, and prefer to stick with my taxonomy. The problem with classifying these 'non-compositional' positions on facts is without a doubt due largely to the problems of those positions themselves: They offer unconvincing treatments of (a) the criteria of identity for facts and (b) the relation between a fact and the objects it is about (see Lewis 1986's criticism on pp. 174–191 of what he calls 'magical ersatzism' of Plantinga and others) and (c) the plausibility of the view that such facts can play the role of truthmakers. As to (b), non-compositional facts seem to be half-worldly entities rather than ideal ones, since, to speak with Meinong, they are *superiora* that *do* involve particulars as *inferiora*. The characterisation of a fact as 'involving' the particulars the fact is said to be 'about' in this sense is often attributed to propositional facts too (but this is no help: It just complicates things, rather than clarifying them). As to (a), if we follow Wetzel (2003), we should say that the empirical identity criterion applies to non-compositional facts in the following way: A fact *f* is identical with another fact *f'* iff it is not possible that *f* should obtain without *f'* obtaining, and it is not possible that *f'* should obtain without *f* obtaining (Fine 1982, p. 58; Pollock 1984, pp. 52–56; Olson 1987). This criterion yields a very coarse-grained conception (Wetzel Sect. 5) which is plausibly

applicable only to real, *compositional* facts, not to *ideal,* propositional facts. As to (c): Non-compositional facts are different from propositional facts and nearer to compositional ones in that non-compositional facts, like compositional ones, are taken to play the role of truthmakers, while propositional facts are not taken to play that role (the position of Searle, who seemingly both has propositional facts *and* has them play the role of truthmakers, seems an exception in the propositional camp).

It is not only hard to see on which grounds non-compositional facts, which are ideal (and thus necessarily existing) and unstructured, can be said to obey the empirical criterion and play the role of truthmakers, it is also nearly impossible to give a general characterisation for these facts. For example, *pace* Wetzel, the empirical criterion cannot be Barwise's, since Barwise accepts fine-grained facts (even though these ideal entities have constituents in them).[2] The fact that reference works like Wetzel (2003) and Mulligan and Correia (2008) do not offer a clear and comprehensive classification of non-compositional positions into a general taxonomy is arguably due to an excessive (and unjustified) focus on the conceptions of facts of philosophers like Plantinga, Pollock and Barwise as *representative* alternatives to compositional facts. For one should not forget that Plantinga, Pollock and Barwise's facts are apparently motivated by the specific needs of possible world semantics, and these needs are very different from the concerns of philosophers like Strawson and others (who adhere to propositional facts). In what follows, I will ignore non-compositional facts, and stick to my classification.

3.2 No Reference to Facts

According to Ingarden, the fact which is the correlate of a sentence *p* of the form '*A* is *b*' can be named both by 'the being *b* of *A*' and by 'that *p*'.[3] Notice however that while the former kind of expression is favoured by defenders of compositional facts, like Armstrong (call them *fact-compositionalists*), that-clauses are favoured by defenders of propositional facts, like Moore or Strawson at some point (call them *fact-propositionalists*).[4] It is not by chance that fact-compositionalists tend to prefer a more artificial-sounding expression to name a fact, and that fact-propositionalists prefer by contrast a more natural-sounding one. For these two groups of philosophers tend to differ vastly in their methodological views of metaphysics

[2] Barwise's facts are different *both* from events (which he calls 'concrete situations') and from propositions—note that Barwise accepts all three kinds of entities, facts, propositions and events, even if it is unclear to me why he needs all three (Barwise 1989, p. 233, 260).

[3] Cf. Ingarden (1948, Chap. XII, § 50; 2nd ed., p. 110), and the note to Ingarden (1960, p. 199). Cf. also Biłat (2001, p. 255). Ingarden refers, more generally, to states of affairs, but I will only focus on facts here.

[4] To be precise, those who think that that-clauses are good names for facts do not argue that *all* that-clauses refer to facts, but only that *some* that-clauses do—more or less explicitly following Vendler's view that non-factive that-clauses refer to propositions while factive that-clauses refer to facts. (I will not pay attention to this issue here; for more, see Chaps. 4, 5 and 6. of Betti 2014a; see also Sect. 4.)

and of the link between language and reality. Roughly, fact-compositionalists are tendentially revisionary metaphysicians, while fact-propositionalists are descriptive metaphysicians. They reply in a very different way to the question: Why should we accept facts? Fact-propositionalists tend to give reasons from language: Natural language shows reference to facts. Fact-compositionalists tend to give metaphysical reasons: We need facts because they are the best candidates to play certain metaphysical roles. The first group, but not the second, takes reference to facts in natural language to be a sort of incontrovertible *datum* and a crucial one at that. From this, they conclude that there are (propositional) facts. It is the descriptive methodological attitude of the first group that I criticise in this paper.

In arguing for the implausibility of the claim that there is no reference whatsoever to facts, Fine observes:

> Surely when we say that not all of the relevant facts have been considered or that the recently discovered fact will prove critical, there is reference of some sort to facts, a reference that will show up either in the use of nominal or sentential variables. (Fine 1982, p. 45)

In Betti 2014a (Chap. 4), I argue that in this passage, 'surely' has as much argumentative force as 'obviously' in 'obviously, when I say that you did it for her sake, there is reference to some sort of sake' (cf. Quine 1960, p. 236)—that is zero. There is neither definite reference to facts nor indefinite reference to facts either. I propose the following argument (inspired by Quine, though not Quinean), as a reconstruction of the reasoning of Fine and others (Betti 2014a, Introduction to Part Two):

Argument from Nominal Reference for Facts

(0) Facts exist iff statements of natural language are true which are ontologically committed to facts.

A statement *s* of natural language is true which is ontologically committed to facts iff

(1) *s* implies a true first-order statement of the form $\exists x \mathrm{F}x$ (indefinite reference), where 'F' is 'is a fact'
  (a) A sufficient condition for (1) is that *s* contains singular terms for facts in natural language (definite reference).
  Sufficient conditions for (a) are
    (i) (some (kinds of) that-clauses are singular terms referring to facts;
    (ii) 'the fact that *p*' is a singular term referring to the fact that *p*;
  (b) A necessary condition for (1) is that 'is a fact' functions genuinely as a predicate in predications of the form '*x* is a fact'.
(2) We have identity criteria for facts.
(3) The quantification over facts in natural language is ineliminable.

(Conclusion) Under 0, facts exist because of 1 (a, i), 2, 3 or because of 1 (a, ii) 2, 3 or because of 1 (b), 2, 3.

In Betti 2014a (Chap. 4), I argue that (1) is false because (a) does not hold. I also argue that (b) cannot hold because 'is a fact' is not a genuine predicate. For what I want to say here, my argument against (1, ii), namely the refutation of the thesis that 'the fact that p' is a singular term referring to the fact that *p,* is most central. My reasoning there goes like this; take the most inclusive list of kinds of singular terms we can come up with: proper names ('Hargle'), indexicals ('he'), simple or complex demonstratives ('this', 'that hedgehog'), definite descriptions ('Argle's cutest pet') and descriptive appositions ('the hedgehog Hargle'). If 'the fact that *p*' were a singular term, what kind of singular term would it be? It could only be a *definite description* or a *descriptive apposition*. It is neither, I argue; but if it is neither, then we are out of options. Saying that 'the fact that *p*' is a singular term sui generis begs the question against the opponent: Thus, 'the fact that *p*' is not a singular term (although, in agreement with what linguists say, it is a *noun phrase*).

You defend the view that it is possible to give an account of the form of the expression 'the fact that *p*', and you refer to Herbert Hochberg's analysis for such an account, which I have not discussed in my book and shall instead discuss here. From a conversation we had in Krakow in October 2010, I know you think that that account is important and promising. So the question I am going to ask is this: What *exactly* is Hochberg's account promising? What kind of account would we exactly need? What criteria or constraints put on such an account would allow us to judge whether it is good or bad? And what justifies such criteria? If these questions are not answered in any new way, we are left with the classical intuition underlying the *Argument from Nominal Reference to Facts*—roughly, the following. We need an account of the form of the expression 'the fact that *p*', because we need it to name facts in the sense of a *singular term,* i.e. we have definite reference to facts (this is '*a*' in the Argument), or in any case we need an analysis of linguistic expressions to reveal that we are quantifying over facts, i.e. we have indefinite reference to facts (this is '*b*' in the Argument) by laying bare the form of those expressions. Hochberg's account is just another attempt to show that that expression is a definite description (we may or may not assume that definite descriptions singularly name facts; I discuss these options below).

In the next section, I will discuss Hochberg's account of 'the fact that *p*' as a definite description and find it either inadequate or irrelevant to the purpose.

3.2.1 Hochberg's Analysis of 'the fact that p'

As a warm up, I start with David's attempt to account for the form of 'the fact that p'. Following a line of reasoning similar to that of other critics (Künne and Lowe), David objects that if 'the fact that p' 'is a singular term, this cannot be because it is a definite description—it's not', but adds:

> Timothy Williams reminded me that we get a similar situation with "the tallest spy is F", which seems to turn into "there is exactly one x such that x is a/the tallest spy and x is F". I think the comparison suggests the solution. In case of the tallest spy, one uses an analysis

> of tallestness: "there is exactly one spy x such that x is taller than every other spy and x is F". So we could use the PA [traditional, i.e. relational, *p*ropositional *a*nalysis of belief, AB] to help us with our case: "there is exactly one proposition x such that for every S, S thinks that p iff S thinks x, and x is F." (David 2002, p. 40, n. 18)

One problem with this solution is that far from obeying it, it *denies* the so-called traditional propositional analysis of belief since nothing in this analysis reflects the *identity* of *x* and whatever is supposed to be denoted by 'that p'. Suppose now we agree on an analysis of this kind: 'There is exactly one *x* such that for every *S, S* knows that *p* iff *S* knows *x,* and *x* is *F*'. Here, the link between the unique fact (proposition in the example) and 'that *p*' is lost in the analysis: It is not what it is supposed to be denoted by 'that *p*' that is *F*, but rather *x*.[5]

A different, though related, problem arises in connection with Hochberg's analysis of 'the fact that *Fa*' (i.e. that Bargle is choppy) as $\iota f(\mathbf{T}(a,f) \,\&\, \mathbf{A}(F,f) \,\&\, \mathbf{IN}(\Phi x,f))$, i.e. 'there is a unique *x* such that *x* is a fact, *x* contains"Bargle"as a term, *x* contains "is choppy" as an attribute and *x* is of the form Φx.' Here is Hochberg's real-time analysis of 'the fact that *p'* (cf. Hochberg 2001, p. 124):

1 *A*: Hey, H, I've read that you've shown the logical form of 'The fact that *p*' taken as a definite description. Can you write that up for me?
2 *H*: Yes, of course, if you'll first let me analyse *p* into *Fa*. It's an extra assumption on the logical form of natural language—but harmless, I promise!
3 *A*: Ok. Can you write up the logical form of 'The fact that *Fa*'?
4 $H:\ (\textit{writes something})\ \iota f(\mathbf{T}(a,f) \wedge \mathbf{A}(F,f) \wedge \mathbf{IN}(\Phi z,f))$.
5 *A*: Mmh. Fancy….How do you read that?
6 *H*: 'The unique fact *f*, such that it contains *a* as a **T**erm, F as an **A**ttribute, and is of the form Φz.'
7 *A*: I see. But the formula is an abbreviation and the iota operator is eliminable, right? So now we take 'the fact that *Fa* is startling' with *S* for 'is startling', and write $S\ \iota f(\mathbf{T}(a,f) \wedge \mathbf{A}(F,f) \wedge \mathbf{IN}(\Phi z,f))$ We can remove the iota operator like this

(1) $\exists f(\mathbf{T}(a,f) \wedge \mathbf{A}(F,f) \wedge \mathbf{IN}(\Phi x,f) \wedge \forall g$
$\left(\left(\mathbf{T}(a,g) \wedge \mathbf{A}(\mathrm{F},g) \forall \mathbf{IN}(\Phi \mathrm{x},g)\right) \leftrightarrow f = g\right) \wedge \mathrm{S}f.$

And I suppose it's okay by you if I remove the (zero-place) variable *f* in this formula and introduce explicitly a (one-place) predicate symbol standing for 'is a fact', like this (and let's take another font, say Boopee, for this new symbol, **f**):

(2) $\exists z \forall y \mathbf{f}(z) \wedge (\mathbf{T}(a,z) \wedge \mathbf{A}(F,z) \wedge \mathbf{IN}(\Phi x,z) \wedge \mathbf{f}(y) \wedge$
$((\mathbf{T}(a,y) \wedge \mathbf{A}(\mathrm{F},y) \wedge \mathbf{IN}(\Phi \mathrm{x},y)) \leftrightarrow z = y) \wedge \mathrm{S}z.$

[5] The analyses offered by Künne and Schnieder in terms of appositive descriptions can be seen as improving on David's analysis, but I show in Betti 2014a (Chap. 4) that 'the fact that *p*' is not an appositive description because that clauses are not noun phrases, let alone singular terms. My argument gives adjunctive reasons to those already pointed out by Chierchia, Partee and Asher, and relies on the claim that that-clauses are not referential.

Which we now read

(i) There is a fact such that it contains *a* as a term, *F* as an attribute, and instantiates Φ*x*;
(ii) There is at most one thing that is a fact such that it contains *a* as a term, *F* as an attribute, and instantiates Φ*x*;
(iii) Everything that is a fact such that it contains *a* as a term, *F* as an attribute, and instantiates Φ*x*, is startling.

And, as I understand you, 'term' here is a Russellian term, i.e. an individual, and *F* is a property.

8 *H*: Right.

Based on this dialogue, let's fix

Hochberg The fact that *Fa* is *G*=*df* There exists at most one thing that is a fact such that it contains *a* as a term, *F* as an attribute, and instantiates Φ*x*, and it is *G*.

Importantly, note that this analysis destroys the syntax of 'the fact that *Fa*' and has consequences for the semantics of this expression. In particular, the that-clause, 'that *Fa*' ('that *p*'), disappears. One might think that the analysis is for this reason self-defeating, since by offering it we are removing prima facie linguistic evidence that the expression 'the fact that *p*' *is* a genuine definite description. For usually, expressions of the form 'The *F* is (a) *G*' are analysed as a conjunction of the following claims:

1. There is an *F*.
2. At most one thing is *F*.
3. Something that is *F* is *G* (or: Everything that is *F* is *G*; on description, see Ludlow 2009).

And, indeed, according to analyses by Künne and Lowe, 'the fact that *Fa* (is startling)' should be analysed as a conjunction of:

1. There is a fact that *Fa*.
2. At most one thing is a fact that *Fa*.
3. Everything that is a fact that *Fa* (is startling).

But this is unsatisfactory, because the expression 'is a fact that *p*' is nonsensical: So one must conclude that 'the fact that *p*' is not a definite description (Künne 2003, p. 10, n. 23, 255; see also Lowe 1998, p. 231).

Suppose we insist that this is not entirely correct. Suppose we say that the very idea behind definite descriptions is this: An expression of natural language is a definite description when it can be given an analysis of the kind that Hochberg gives. After all, Hochberg's analysis can be seen as including an existential claim, a uniqueness claim and, one could argue, a universal claim. Actually, we could say that, far from raising further complications, Hochberg's analysis seems conveniently to *remove* a problem, since it removes the expression 'that *p*', which, I maintain in Betti (2014a), is non-referential and responsible for much trouble. Besides, in

general, Hochberg's analysis seems to perform quite well, as it manages neatly to distinguish the following two expressions:

(1) The fact that Plato was a power-hungry political amateur (is startling)
(2) The fact that Plato was most feared (is startling)
(1') The unique *x* such that *x* is a fact has *Plato* as a term, has *being a power-hungry political amateur* as an attribute, and instantiates Φ*x* (is startling).
(2') The unique *x* such that *x* is a fact and Plato feared *x* the most (is startling).

Unfortunately, not all is well. To see why not, let us first grant that Hochberg's analysis indeed provides an analysis of 'the fact that *p*' as a definite description (though on pain of destroying the prima facie syntax of the expression 'the fact that *p*', something that the other analyses mentioned above do not do). The main problem is that Hochberg's analysis builds directly into the *analysans* theoretical considerations as to what facts are. I am not going to say that analyses of this kind should never be employed, or that they are misguided; I say only that they failed to achieve the methodological ideals underlying the Argument from Nominal Reference.

The first problem with Hochberg's analysis is that it incorporates specific determinations about what facts are and, consequently, is not general enough. It works at most for *compositional* facts, for it incorporates identity conditions for those facts: From the same constituents in the same form (or structure or order), we will always get the same fact. The facts one assumes by taking up this analysis have to be formally structured complex objects with minimally two constituents, one concrete (T) and one abstract (A). These characteristics correspond to three of the seven conditions I gave above for compositional facts. From this, it can be seen that the objects whose apt definite description is the one given by Hochberg cannot be propositional facts. And there is more: Hochberg's analysis does not *as such* uniquely characterise facts so precisely as to exclude that the 'facts' in question are other things, namely integral wholes (substances) or mereological complexes (sums of tropes), because nothing can be derived from that analysis as to the kind of composition at issue, or as to the ontological status of the whole with respect to the parts ('constituents'): (*Hochberg*) could uniquely describe any of these three kinds of entities, facts, integral wholes or mereological complexes.[6] Now, since Hochberg is a friend of compositional facts, he likely does *not* mean by 'fact' either real wholes or mereological complexes. Yet, this does not follow from (*Hochberg*) taken on its own. We could, of course, supplement the analysis in such a way as to ensure that the items purportedly picked out by the definite description are compositional facts and compositional facts only, by adding the other four characteristics or conditions I indicated in Sect. 1, which would be needed to uniquely describe such facts. But one question would immediately arise: *What* would we really be doing? If we supplemented Hochberg's analysis with definitory metaphysical analyses of this kind, we would be using our *theoretical findings* to give an analysis of the expression 'the fact that *p*': But do we mean that this is how this expression, this ordinary language phrase, should be understood? Is this what *ordinary people* mean by it? Or is this what *philosophers who believe in compositional facts* want to be understood as

[6] On the difference between facts, mereological complexes and integral wholes, see Chaps. 1 and 2 of Betti (2014a).

meaning when *they* use the expression 'the fact that *p*' (cf. Varzi 2002, 2007)? For one thing, this is surely not the analysis that would be given by philosophers who accept *propositional* facts.

This need for theoretical supplementation makes exceedingly clear that Hochberg's analysis is not *merely* linguistic. To be able to give the analysis Hochberg gives, and eventually to supplement it with the right identity conditions, we need to make a detailed determination of what we assume in our catalogue of the world *before* the analysis of the expression 'the fact that *p*' can even begin. This strategy is a strategy in which, contrary to the methodological ideals of language-based metaphysics, one does not *first* inspect language to see whether there is prima facie reference to whatever is called 'facts', and *then* decide what should be in the world on the basis of linguistic constraints; one does just the opposite. You first decide that compositional facts are in your catalogue of the world, and then decide how you want to talk about them. This difference in strategies is methodologically very important. For if our strategy is the revisionary one of fixing the world and then finding ways to pick up whatever we have fixed, why then should we want to claim the following?

> Any philosophy of facts owes us an account of the form of such expressions as "the fact that Sam is sad". (Lowe 1998) (Mulligan and Correia 2008, Sect. 1)

If instead our strategy is the descriptive one of looking at how natural language works in order to lay bare ontological implications, then Hochberg's analysis is simply no use, for it brings us too far from natural language. And we cannot just say: 'Who cares about strategies? You wanted a definite description and you have it.' We cannot approach the matter so lightly without getting into some deep methodological problems. For the point is this: Why should we want to name facts, and name facts in any specific way? Why is this so important? And important to which enterprise? That enterprise cannot be a descriptive one, for Hochberg's analysis cannot support any prima facie linguistic arguments for facts: Who can possibly come to the analyses of *Hochberg* or *HochbergProp* just by staring at the expression 'the fact that *p*'? Reconsider:

> *Hochberg* The fact that *Fa* is $G =_{df}$ There exists at most one thing that is a fact such that it contains *a* as a term, *F* as an attribute, and instantiates Φx, and it is *G*.

The language employed in the right-hand side of both these analyses is not a natural language, but a formal or semi-formal or at least regimented language. Natural language does not contain genuine variables. The semi-formal language on the right-hand side is one that *no one* uses (philosophers do, but that is not an argument, is it?). No one speaks, let alone *thinks* in that way.

To eliminate all doubts that in Hochberg's analysis the link between the prima facie syntax of 'the fact that *p*' is destroyed, consider the following. Once we pass from the original expression to Hochberg's analysis, we have no way to get back to the original phrase. Consider (read '⇒' as 'translate'/'is the translation of'):

Natural language	*From ...to*	*Formal language*
(3) the fact that Bargle is choppy is startling	⇒	$\exists f(\mathbf{T}(\text{Bargle}, f) \wedge \mathbf{A}(\text{Being choppy}, f) \wedge \text{IN}(\Phi x, f))$ is startling

Formal language	*From ...to*	*Natural language*
(4) ιf(**T**(Bargle, *f*) ∧ **A**(Being choppy, *f*) ∧ IN(Φx, *f*)) is startling	⇒	the fact that Bargle is choppy is startling

Claim (4) cannot be correct, since nothing on the left-hand side tells us that we *must* retranslate 'ιf(**T**(Bargle, *f*) ∧ **A**(Being choppy, *f*) ∧ IN(Φ*x, f*)) is startling' by an expression that contains 'the fact that *Fa*', i.e. the expression in the left-hand side of (3). We may choose some other translation. If you insist that our translation must contain the expression 'fact', because *f* appears on the right-hand side, then of course you should also reintegrate 'term', 'attribute' and 'instantiation'; the only thing that you can plausibly get is this:

(3) ιf(**T**(Bargle, *f*) ∧ **A**(Being choppy, *f*) ∧ IN(Φ*x, f*)) is startling ⇒ There exists at most one thing that is a fact such that it contains Bargle as a term, *Being choppy* as an attribute, and instantiates Φ*x,* and is startling.

But of course, as I've said, no one speaks like this. If we agree to these translations, then, it is clear that we are not merely showing something about natural language with the aid of formal language; we are *replacing* natural language by a formal language, operating by stipulation and theoretical decision. Once we pass in this way from natural language to an analysis in formal language, nothing can force us to return to natural language (or at least nothing forces us to go back to *exactly where we were*). The situation reminds us of Quine's original criterion of ontological commitment: The direction from natural language to formal language is fundamentally the only one that counts. Such unconcern for natural language is of course legitimate, but it is exactly on this point that Quine's own position and that of the defenders of the Quine-like argument from Nominal Reference part ways. It is not an option for the defenders of this argument just to deliver an analysis in formal, semi-formal or regimented language, for this analysis has to be a means, not an end. What a philosopher of the Argument from Nominal Reference-mould wants, or at least should want, is a way to translate formulas back to natural language.

Let us now say, therefore, that any translation back to natural language is fine so long as it brings us back to a proper expression of natural language. But if so, then the following three options are all perfectly fine:

(4) $\iota f(\mathbf{T}(\text{Bargle}, f) \wedge \mathbf{A}(\text{Being choppy}, f) \wedge \text{IN}(\Phi x, f))$ is startling ⇒
Bargles being choppy

(5) $\iota f(\mathbf{T}(\text{Bargle}, f) \wedge \mathbf{A}(\text{Being choppy}, f) \wedge \text{IN}(\Phi x, f))$ is startling ⇒
the fact that Bargle is choppy

(6) $\iota f\left(\mathbf{T}(\text{Bargle}, f) \wedge \mathbf{A}(\text{Being choppy}, f) \wedge \text{IN}(\Phi x, f)\right)$ is startling ⇒
That Bargle is choppy

There seems to be no principled reasons why you would have to choose (4) over (3) or (5). But if there is no principled way to get (4), then our possession of a prima facie expression of natural language for facts in which the word 'fact' appears be-

comes irrelevant. If this is our conclusion, then linguistic arguments for facts based on a prima facie analysis themselves are irrelevant, and a fortiori so does the Argument from Nominal Reference. The only important element here is our possession of a successful *explication* in formal language. But this can only be interesting for a revisionary metaphysician.

One might want to observe that in principle, it does not follow directly from what I said—contrary to what I seem to have just suggested—that Hochberg's analysis is completely useless for propositional facts. As it stands, it is useless; but surely, one can adjust the analysis to include the identity conditions for propositional facts? Yes, one can. We can indeed adjust Hochberg in such a way that the right-hand side of the analysis gives you propositional facts, something like this:

HochbergProp The fact that *Fa* is $G =_{df}$ There exists at most one thing that is a fact such that it corresponds to the unique proposition [*Fa*] such that [*a*] occurs in [*Fa*] as a subject-concept, [*F*] as a predicate-concept, and [*Fa*] is of the form Φ*x*, and it is *G*.[7]

Now, we have a Hochbergian definite description that fits propositional facts. As was the case in the Hochbergian analysis for compositional facts, this Hochbergian analysis for propositional facts includes the identity conditions for propositional facts given above: to each proposition, its corresponding fact (and vice versa); same proposition, same fact.

But now a problem similar to the one we saw above immediately arises. As was the case with its compositional counterpart above, *HochbergProp*'s analysis assumes a world of propositional facts from the start. You do not *first* inspect language to see whether there is prima facie reference to facts and then decide what should be in the world; you do just the opposite: You first decide to accept propositional facts, then decide how you want to talk about them. We are now building identity conditions for propositional facts into our analysis.

So it seems to me that a descriptive metaphysician should reject this analysis as ill conceived. And even if you say that it is perfectly fine for a descriptive metaphysician, there is still a problem, namely this. As I have argued elsewhere, the identity conditions built in *HochbergProp* lead to the conclusion that propositional facts are just true propositions: All propositional facts collapse into true propositions. This I demonstrate in Chap. 5 and 6 of Betti 2014a, where I reject six attempts to show that propositional facts (as characterised in Sect. 1 above) are distinct from (true) propositions. In other words: The expression 'propositional facts as distinct from true propositions' expresses, to speak with Bolzano, an *empty idea*.

[7] This reformulation is done in terms of Bolzanian propositions, but an alternative could easily be given for Aristotelian ones (i.e. sentences equipped with meaning). Also, I am aware that what I write here depends on the analysis of 'the proposition that *Fa*', which I am using: the unique thing such that [*a*] occurs in [*Fa*] as a subject-concept, [*F*] as a predicate-concept and [*Fa*] is of the form Φ*x*. Note that I am not advocating this analysis of 'the proposition that *p*', but merely extending to propositions the analysis that Hochberg is giving here for facts on the basis of the identity-conditions for propositional facts outlined above.

So, a descriptive metaphysician gains nothing anyway by insisting that 'the fact that *p*' is a singular term whose form is fixed by *HochbergProp*. There is simply no *definite* reference to propositional facts (i.e. reference to facts via singular terms).[8] All right, one can say, but how about *indefinite* reference to such facts? The predicate 'is a fact' appears, of course, also in the analysis of the form of sentences like 'some facts are important' as $\exists x(\mathrm{F}x \wedge \mathrm{I}x)$ and thus *also* imply $\exists x\mathrm{F}x$. Is not the predicate 'is as fact' genuinely used as a predicate in these sentences, in which indefinite reference to facts is made? I say that this is not the case. The issue turns again on whether we can make any sense of expressions *in natural language* such as 'something is a fact' (*without* assuming that that-clauses are singular terms). But we cannot. For which expressions would do?[9] Besides, *indefinite* reference to facts comes down to (truthful) applications of 'is a fact' to something. But, again, if this something is supposed to be a propositional fact, then, as long as it is not convincingly shown that propositional facts must be accepted alongside propositions (among others by rejecting the six arguments in Betti 2014a, Chap. 4), *that* something can only be a true proposition. In fact, it is an illusion that we can ever manage to show that in natural language we have genuine quantification over facts. I come back to this in the next section.

Suppose we come back to *Hochberg,* the *compositional* version: Then, we *could* either maintain that definite descriptions are singularly referential and function as singular names, or accept the quantification analysis. Either way would do, for the way we name facts, again, does not seem to count: We need to show that compositional facts are there or not, by arguing for them directly, not from their linguistic description. I come back to this in Sect. 4.[10]

3.3 'Facts' does not Mean Philosophers' Facts

I say that we do not have genuine quantification over either compositional or propositional facts in natural language, and that it is an illusion to think that we do. In fact, the methodology of ordinary language philosophy as espoused by defenders of the Argument from Nominal Reference, which maintains that evidence concerning the nature of facts can be gathered by inspecting the various everyday uses of certain

[8] This seems quick, of course, but as I indicated at the beginning of Sect. 2, I offer an extensive critical discussion of this point in Betti (2014a), Chaps. 4, 5 and 6..

[9] On this point, see Betti (2014a), Chap. 4, where I argue from language data (and not using the metaphysical argument based on the collapse of propositional facts into true propositions) that 'is a fact' is not a genuine predicate applying to the objects falling under 'something' in 'something is a fact'.

[10] I have assumed so far that among metaphysicians accepting facts, descriptive ones would have to choose HochbergProp and revisionary ones Hochberg. This is because, as I said at the beginning, the first tend to accept propositional facts and the second compositional ones. The reason for the latter claim is among other things that propositional facts cannot be convincingly said to play any metaphysical role. It seems fundamental to revisionary thinking that any category of entities would have to play some role to be metaphysically legitimate. I come back to this in Sect. 4.

expressions in ordinary language, is question-begging. Although such an approach presents itself as being based squarely upon empirical data, in fact a number of highly technical theoretical assumptions are built into it from the very start.

The Argument from Nominal Reference relies, however implicitly, on Quine's criterion of ontological commitment. Criteria such as these are motivated by the recognition that language may deceive us, and that therefore we need to show how the expression 'facts' can refer to facts successfully, in a truly transparent way. The argument does not go through. Suppose now, that the argument *did* go through: That would mean that we have argued in an effective way that 'fact(s)' *must* be taken at face value as referring to (a/the) fact(s), and that therefore we may accept that there are such things as facts. Suppose indeed that someone came up with rebuttals of all possible counterarguments (including those in my book) I raised against that argument as to definite and indefinite reference. In that case, it would become crucial for me to show that premise (3) in the argument for nominal reference is false, i.e. to show that quantification over facts in natural language is ineliminable. Or, alternatively, suppose we just forget the Quine-like criteria, and try to argue for the idea that 'fact(s)'—language should just be taken at face value without passing for any translation into first-order logic. After all, there have been philosophers—ordinary language philosophers—that rely on the mere use of certain words in natural language (often just English) to assume that the things named by such words exist. For does it not seem true in an embarrassingly trivial way that 'facts' is a natural language expression referring to facts? Suppose we indeed agree that 'facts' refers to facts. Now, what would *this* mean? What are we claiming? That *there are objects that we name 'facts'*; yet, this does not approach even the shadow of a theory of facts. What, metaphysically speaking, are the objects we call 'facts'? A theory of such objects would need, like any metaphysical theory, to be explicit about whether, for instance, facts are entities in their own right, i.e. objects not reducible to something else—events, true propositions or whatever—perhaps by appealing to some theory of facts that has already been proposed. So, we come back to the need to give identity conditions for facts, which in turn depends on a characterisation of what *sort of thing* facts are. For, obviously, if 'facts' can be taken to refer to objects that are actually something *other than* the objects I have characterised as such, then linguistic arguments can do very little to support the claim that we must assume in our ontology facts as I have characterised them above. We can still agree on another meaning of the word, and still perhaps raise interesting questions, such as whether what we mean by 'facts' is apt to account for fact-talk in natural language or not—with the proviso that we agree, I would say that being apt to account for fact-talk in natural language is a role that *must* be played by some entity. However, the conclusion I come to as far as linguistic arguments for facts are concerned is that when facts are construed in terms of the two main theories I highlighted, there is no convincing argument that language carries 'natural' reference to such *philosophers*' facts. The best option in this respect would be to treat 'fact' as meaning *grounded statement that we hold as true* (and I am remaining deliberately vague on what this might really mean).

The problem with usual ordinary language methodology that insists that the expression 'facts' refers to philosophers' facts (in the sense I fixed in Sect. 1) is this: *Unless* that methodology is accompanied by restrictions—restrictions that a philosophical community is prepared to share as methodologically acceptable—it will bring about a potentially useless proliferation of entities, and a conception of metaphysics as a discipline relative only to certain natural languages, again, often just to English. I am not sympathetic with a methodological position of this kind, but really have no good reason to argue that it is bad in itself, so to say—our assessment should depend entirely on what we want the methodology to do. But *any* methodological position must be applied consistently, and in the case of ordinary language philosophy, I do not see how we can avoid resorting scrupulously to the wealth of empirical linguistic research available today—and in such a way that the results of such research are accepted, no matter what.[11] We cannot tolerate surreptitious and question-begging deviations in philosophical method—that is, we cannot change the methodology by a kind of sleight of hand in the midst of an investigation. If we start from language and its functions, we cannot make exceptions on the basis of our philosophical preferences, and let those preferences guide how to interpret linguistic data, *unless* of course we accept that we are simply seeking a linguistic way to make our philosophical choices perspicuous. But that is another story. It is not acceptable to use our own philosophical convictions to deviate from certain data *just in order to argue* for those very same convictions a moment later. For if one adheres to the methodology of ordinary language philosophy, it becomes a daunting task to decide, without begging the question, which words we have to take as referential, and which are synonymous and coreferential, or *both* synonymous and coreferential but merely different in their sound or in their pragmatic roles.

An example of this attitude is what we might call the Awkward Ring Rule:

> (Awkward Ring Rule) Phrases denoting the same objects must be interchangeable in all contexts while yielding the same linguistic effects.[12]

This rule has unpalatable consequences: Its defenders must either accept these, or do away with the rule altogether. I think the best option is to ban rules of this kind from a good methodology in metaphysics. The way certain expressions and turn-of-phrase sound cannot be used to argue on matters such as reference and existence. Why should we give any credence to a methodology that relies on how English

[11] This is no easy solution of course. For it is not clear what philosophers should derive from linguistic analyses by professional linguists, especially when rival and mutually excluding accounts are available. Just to mention an example, according to Joan Bresnan, among linguists 'there is very little agreement about what the category of sentential complements such as that-clauses actually is, and why that is', Joan Bresnan, 'The fall of COMP?' message to the LINGUISTLIST list on Oct 1, 1996.

[12] The Awkward Ring Rule is inspired by this: 'The things that are true are propositions, and they cannot sensibly be said to be the case. The things that are the case (or that obtain) are states of affairs, and they cannot sensibly said to be true. *So* the predicates "is the case" and "is true" have not even overlapping extensions' (Künne 2003, p. 257, my emphasis). Note however that Wolfgang Künne does not adhere *unrestrictedly* to a rule of this kind (see Künne 2003, p. 11, n 25). I discuss the Awkward Ring Rule in Chap. 5 of Betti (2014a).

phrases sound to *us,* not even to linguists or refined literates, but to philosophers of all people, fed disproportionately as we are on *technical* talk about propositions, facts, events, and what have you? Why should we think that the mere use of the word 'fact' commits us to an ontology of 'some sort of' facts (as distinct from other true propositions)? What could count as convincing evidence for this? And what if, in trying to select which good-sounding turns of phrases play a role in reference and existence, we find out that some expressions sound good to us, but awkward to others—how can we decide who is right?

One option would be to incorporate corpus analysis into our methodology (i.e. quantitative and qualitative analysis of actual and representative language data sets) along with historical data about language. For instance, if one could show that 'fact(s)' in an English sentence carries without exception the meaning of 'fact(s)' relevant to some of our discussions, and that this has always been the case, then one might have a point, perhaps small, but a point. (For, to be sure, this would not be enough, since one would have to offer a cross-linguistic analysis, but we shall leave this aside.) Once again, I am not pleading for this position at all: I am just stressing its implications as much as I can to show just how illusory this methodology is.

Suppose we apply this method to facts. As pointed out by Olson, who follows the etymological information in the Oxford English Dictionary, originally a 'fact' was a 'deed' or 'action', 'more often than not criminal' (Olson 1987, p. 10). Olson reports six meanings of 'fact', of which the second comes closest to the one we want:

1. occurrences *in general*, as well as actions; hence
2. what *is the case*, whether an occurrence or not; hence
3. what is *known* to be the case; hence
4. what is known by *observation*, rather than inference; hence
5. the actual *data of experience*, as opposed to what we infer: and, developing out of one or more of the above senses,
6. actually existing *things*, such as persons and institutions, apparently to contrast them with fictions (a use the dictionary characterizes as 'strained') (Olson 1987, p. 10)

Olson rightly observes that none of these 'commits the user to facts as entities in their own right' (Olson 1987, p. 10). Indeed, it would be most difficult to argue successfully that the 'facts' referred to in 'not all the relevant facts have been considered' (Fine's example) *must be* either compositional facts as characterised above, or propositional facts (*as distinct from true propositions*). Consider the following:

> Juror #8: Here's what I think happened: the old man heard the fight between the boy and his father a few hours earlier. Then, when he's lying in his bed he heard a body hit the floor in the boy's apartment, heard the woman scream from across the street, got to his front door as fast as he could, heard somebody racing down the stairs and assumed it was the boy.
> Juror #10: Now, look—we're all grown-ups in here. We heard the facts, didn't we?

These lines are taken from Sidney Lumet's *Twelve Angry Men* (1957), a movie where the word 'fact(s)' occurs in a highly realistic way. What are the 'facts' that Juror #10 says he and the rest of the jury have heard? Did he hear facts in any of the forms we have considered? (compositional, propositional, or even hybrids of

the two?) Well, first of all, he heard spoken sentences, just as the old man claims to have heard a body hit the floor: He heard sounds of a certain kind. Now, one can very well object that 'hearing the facts' means more than just literally, physiologically hearing spoken sentences; it means that the latter have been understood *as meaningfully stating something*. But if something *that is stated* is to be identified as a fact, then 'fact' here can mean anything from (2) to (5) mentioned earlier.[13] The technical take on *what is stated* among philosophers usually is that what is stated by a sentence is a proposition. Let us accept this. If we now agree for the sake of argument that Juror #10 heard sentences stating *what is the case,* i.e. facts in the sense of (2), then these cannot be facts in any other sense than true propositions. To claim the contrary, we must be able to argue convincingly that hearing sentences stating what is the case *is* hearing facts, rather than hearing (the content of) sentences, i.e. *propositions which are (assumed to be) true*. But on what basis can we argue that grasping what is stated to be the case, or just grasping *what is stated,* is grasping what is *denoted* by sentences (supposedly, facts) rather than what is *expressed* by them (supposedly, propositions)? Such a basis can be provided only by a *theory* that can account for the data in the best manner. But if we want to account in a coherent manner for the way 'facts' occurs in *Twelve Angry Men,* then 'fact(s)' must stand for whatever can be stated as well as for whatever can be *doubted*. The whole point of the movie is that as long as the jury has a reasonable doubt, no one can be declared guilty. It is quite hard to say when and how the philosopher's facts would enter the picture here. If we have to follow the view on that-clauses of Vendler (1967) and others, whose views are considered authoritative by whoever wishes to defend the thesis that factive that-clauses refer to facts while non-factive that-clauses refer to propositions, then propositions can be doubted, but not facts, for 'doubt' is non-factive. Note that by saying this, I do not mean to say that this enables us to conclude that the 'facts' of ordinary people are (true) propositions. We can at most, perhaps, conclude with Olson that 'even a philosopher may use the word 'fact' without talking about facts' (Olson 1987, p. 10). Even if we were to grant that 'fact(s)' occurred in ordinary language exclusively in the meaning *ad* (2) mentioned earlier (and this is not the case), this *alone* would not be evidence that any of the philosopher's facts are meant specifically. It is not clear what connection the word 'fact' in the expression 'That's a fact' has to the metaphysical notions of fact, namely those which see facts as entities at the level of reference. This is the reason why Armstrong chose the phrase 'state of affairs' for his technical notion of fact instead of the word 'fact':

> The word 'fact' is too much a term of ordinary speech. In particular, contemporary use ties it too closely to the notions of statement and proposition. (Armstrong 1997, p. 19)

The idea might be that the expression 'that's a fact' is used just to endorse (or to assert the truth of) a given statement or proposition (Armstrong 1989, p. 6). If one is

[13] Notice that, saying that 'facts can be stated' (Vendler 1967, p. 144) or that they 'can properly be stated' (Clark 1976, p. 262) is compatible with all positions on facts, even those according to which facts cannot be named or cannot be the object of singular reference and those in which facts are just truthmakers of propositions (Clark 1975, p. 7 ff).

to believe the way people talk, there seems to be ample evidence that people often mean by 'facts' just what philosophers would call 'propositions' (held to be true).

Some examples might show how tricky it is to conclude from observations about natural language to metaphysical matters. Wolfgang Künne gives the following substitutions as evidence that facts are not true propositions (though not the best evidence):

(1a) True propositions are true.
(1b) *Facts are true.
(2a) The Pythagorean Theorem is true.
(2b) *The Pythagorean Theorem is a fact.
(3a) The victory of the Labour Party is a fact.
(3b) *The victory of the Labour Party is a true proposition. (Künne 2003, p. 10)

Künne observes that certain forms of speech are improper if 'fact' and 'true proposition' are substituted for one another. If facts are nothing but true propositions, he says, why is it that (1a) is trivial while (1b) has an awkward ring, (2a) makes sense while (2b) does not, and (3a) is significant while (3b) is nonsense? In reply, one can say that the American corpus (http://www.americancorpus.org/), just to take an extensive corpus easily accessible, gives no results for expressions of the form of either (1) or (2) ('true proposition' in subject or object position): 'True proposition' *never* occurs except in the sense of 'proposal'. 'True fact' returns 32 results, all in the relevant meaning (*not* in the sense of 'true' as in 'true friend'), both in fiction and news.[14] Should we conclude that facts are indeed propositions? No, we should not. But an ordinary language philosopher should conclude exactly that: for, by the same token, the reason why (2) is awkward might be that 'propositions are true' is awkward. (But really, should we accept this conclusion as methodologically sound?) Moreover, 'false facts' may sound oxymoronic to philosophers, but, far from being based on empirical data, this can only be a case of *stipulation*; for to those in judicial settings—judges and courts—'false facts' does not seem oxymoronic at all:

> Thus, the word 'facts' is used in a narrow, lawyerly way; it includes those matters disputed in litigation other than legal principles and procedures, a distinction seen in such oft-used phrases as 'issue of fact,' 'question of law,' and 'mixed question of law and fact.' […] As described by those terms, a fact is not necessarily '[s]omething that has really occurred or is actually the case' […] but rather what a judge, for purposes of resolving a case, will accept as such—or will accept as something that a reasonable legislator could accept as such. Thus, in the lawyer's realm, the notion of 'alleged fact' or even 'false fact' is not unintelligible. (15) (Stewart 2008, p. 318)[15]

And are these examples confined to legal talk? No. Here is an example from a philosopher, Whewell:

[14] These results come from a search I made in November 2008. The same search on Sept 7, 2011 gave one result for 'true proposition' in the philosophical sense (Künne's) from an academic paper and thirty-four results for 'true fact' mostly in non-academic sources (except for one academic source).

[15] This example is from a judicial clerk: A negative value judgment is actionable if it charges or imputes a false fact, such as dishonor, to the plaintiff (Cohen 1991, p. 688).

> Art. I. Facts must be true. (*Novum organon renovatum,* 1858, ix)

And here is an example from a distinguished present-day political philosopher, Peter Augustine Lawler:

> One clue to answering these questions is to note Jimmy's factual error: Carole King never had a hit with 'Amazing Grace.' And to call attention to that *false fact* about Carole King, Stillman actually has Jimmy mention it twice, the first time as a rather lame digression. (Lawler 2002, p. 94, my emphasis)

But could this be just technical talk after all, far removed from what normal people say and do? No. Here is an American high-school teacher, Emily Kissner, talking of facts and opinions. Can a fact be false? Yes.

> A fact is a statement that can be proven true or false.[16]

In the light of this, it is unreasonable to insist that ordinary language use, or at least ordinary language use *alone,* commits us to either compositional or propositional facts as characterised by their defenders. Both the historical record and data on present usage offer evidence to the contrary.

Let me stress that I do not give these examples in order to claim that facts can (in fact) be false against those who hold the opposite view. The point is not to heap up evidence for either position by playing with Google but rather to make clear that we will be unable to defend or attack either position—unable, for instance, to claim that 'false fact' is a wrong use or an exception to the right use—unless we make *theoretical assumptions* that tell us *why* this or that use is an exception or deviation from the use we think it is right.

3.4 Facts as Semantic Values

Maybe you agree on the critical points I put forward in the last section against the descriptive methodology of ordinary language philosophy. But I am not sure that you agree with the following claims as well, or to what extent. To me, all I have said so far means that there is no 'natural' reference to facts. And it means that the only sensible position on reference to facts is one according to which facts are taken to be the *semantic value* of certain expressions *by stipulation* (with the proviso, we can convincingly argue by means other than linguistic ones that facts exist.) Here, I will try to make my point clearer.

In Chaps. 4, 5 and 6 of Betti (2014a), I establish that the only facts that that-clauses can refer to—if they refer at all—are propositional facts. I discuss the following claims as to the reference of that-clauses to such facts: *Fact Reference* and its refinement, which I call *Fact Reference*$_{Power!}$:

[16] Originally found in this presentation http://www.slideshare.net/elkissn/understanding-fact-and-opinion; now available at http://www.teacherspayteachers.com/Product/Understanding-Fact-and-Opinion.

> *Fact Reference* whereas some (kinds of) that-clauses (are singular terms) *refer (ring) to propositions*, some (kinds of) that-clauses (are singular terms) *refer (ring) to facts*.
> *Fact Reference*$_{Power!}$ factive that-clauses *refer to facts* while non-factive that-clauses *refer to propositions*.[17]

I show in Chaps. 4, 5 and 6 of Betti (2014a) that these claims are false. There, I perform what we might call a *reduction* of propositional facts to something else, i.e. true propositions. Accordingly, what certain that-clauses refer to is at most what 'true proposition' refers to, and this item is at most a Bolzanian proposition (notice that this is not the same as saying that any of these words can be exchanged in all contexts).[18] This leads to *Reference*:

> *Reference* All that-clauses refer to propositions. Non-factive that-clauses *refer to propositions* while factive that-clauses *refer to true propositions*.

This claim, I say, *could* be endorsed, but only under the assumption that that-clauses are singular terms, i.e. they carry definite reference to some specific entity. I show that this assumption is false in Chap. 3, where I perform an *elimination* of propositional facts: that-clauses—and so the expression 'the fact that *p*'—do not refer at all; a fortiori, they do not refer to facts. *Fact Reference, Fact Reference*$_{Power!}$ and *Reference* are false because that-clauses are not singular terms. The only way to show that that-clauses refer to propositions or facts is to assume this conclusion from the very beginning. And this, of course, is a petitio principii. This leaves only the following option:

> *Semantic Value* At least some (kinds of) that-clauses have facts as their *semantic value*.

Semantic Value is a technical claim which is different from *Fact Reference, Fact Reference*$_{Power!}$ and *Reference* in some important ways. Whereas the latter makes sense against a descriptive background, *Semantic Value* makes sense against a

[17] Where factivity is fixed as follows:

> **Factivity:** language exhibits a phenomenon called factivity; this phenomenon is linked to the implication or presupposition of truth of certain embedded clauses.

[18] I show in Betti (2014a) that it is not only legitimate to say that factive clauses refer to true propositions (or, if you prefer, that it is perfectly legitimate to take propositional facts as true propositions)—it is in fact a better option (if we assume that that-clauses are singular terms). The linguistic results that allegedly lead to Fact Reference, including those from celebrated work at the crossroads of linguistics and philosophy, such as that of Vendler's (cf. his 1967, 1972), do not require facts at all. If factive clauses refer to true propositions, the difficulties of some positions (Vendler's) with the opacity of knowledge claims disappear, and the non-factive use of 'know' loses all mystery. If factive clauses refer to true propositions, for instance, there is no need for the enormous apparatus that some (Peterson) assume in order to patch up Vendler's position. My argument goes like this: I show that if we accept that some that-clauses refer to propositional facts while others refer to propositions (*Fact Reference*$_{Power!}$), then propositional facts collapse into true propositions. Coming up with a difference in grain between propositional facts and true propositions as a way to block the collapse begs the question, for in doing so, we assume what we want to prove, namely that propositional facts and propositions are two different categories of items. In addition to being question-begging, dependent on the theories in which it is put forward, the argument may also be ad hoc, namely insofar, as we come up with a difference for the sole purpose of solving the problem, i.e. blocking the collapse.

revisionary background. Descriptive metaphysicians seem to think that claims such as *Fact Reference* follow from purely linguistic results (this is however false and question-begging). We investigate the way in which certain expressions function in language (that-clauses in this case)—so goes the descriptive reasoning—because this reveals something interesting and valuable about the world (in this case, facts), and this is how we come to fix claims such as *Fact Reference*. By contrast, *Semantic Value* does not suppose this descriptive way of reasoning at all. *Semantic Value* just says that certain elements of language (certain that-clauses) are taken to be paired off with items that are not in language (facts). This pairing off has an important stipulative aspect. A revisionary metaphysician who accepts *Semantic Value* does not think that that claim is set up by inspecting language alone: She or he does not think that language (that-clauses) tells us anything about the nature of the non-linguistic items involved (facts), nor that linguistic considerations alone give us by themselves any good reason to accept non-linguistic items in the catalogue of the world. As I have mentioned in the previous sections, for a revisionary metaphysician, the nature of facts and the reasons why we should accept them have to be argued for by other means, independently of linguistic considerations.

To understand better the difference between *Reference* and *Semantic Value,* a passage from Yablo is particularly valuable:

> Now in asking, "Are they referential?" I mean not, "Are there Montague grammarians or other formal semanticists who have cooked up super-duper semantical values for them, say, functions from worlds to functions from worlds and *n*-tuples of objects to truth-values?" […] The answer to that is going to be *yes* almost no matter what part of speech you're talking about—connectives, prepositions, and apostrophes 's' not excluded. I mean: Are they referential in the way that singular terms are, so that someone […] could reasonably be said to be *talking about* its referent, or purporting to talk about its purported referent? (Yablo 1996, p. 260)

Claims such as *Fact Reference* suppose a natural link between everyday language and the world, the paradigmatic kind of which is *naming,* i.e. the kind of reference of singular terms. *Semantic Value* does not suppose any natural link of this kind. As is clear from the quote, semantic values need not be anything even remotely similar to common items of our experience (though they can be). The semantic values of expressions are *chosen,* and can be whatever one likes—they can be mathematical surrogates such as set theoretical entities, but also entities such as facts.

As I said, in order to endorse *Semantic Value,* we need to show by some non-linguistic means that facts exist. For we can *stipulate* that facts are the semantic value of certain that-clauses and of expressions such as 'the fact that *p*' and just 'fact', only if we are able to argue convincingly that facts exist. Or, to put it more responsibly: We can do so only if we are able to argue convincingly that there is a reason to include them in the catalogue of the world, which, as mentioned, comes down to showing that they are the best candidates to play certain metaphysical roles. If we cannot argue convincingly that facts exist, then they simply cannot be the semantic value of any expression.

In principle, *Semantic Value* is open not only to defenders of compositional facts but also to defenders of propositional facts. In practice, however, the latter option

is not viable. For in order to allow propositional facts in the catalogue of the world, we would have to show that we need those facts to play certain roles. But propositional facts do no job except that of being the referent of certain linguistic items—of that-clauses, among others. If that—i.e. serving as referent of certain linguistic items—is the only philosophical problem propositional facts are needed to solve, then we should dismiss them as soon as we discover that we do not need them (this is actually what Fact Reference$_{Power!}$ *itself* entails). If we want to resort to any ontological difference between propositional facts and propositions to show that we need the former alongside the latter, we must theorise it directly, and in any case independently of linguistic claims such as Fact Reference$_{Power!}$. If we intend to use Fact Reference$_{Power!}$ to *establish* that there are two different categories of items, but by relying on that claim we end up with only one, then we should accept this as a result of the theorisations involved in Fact Reference$_{Power!}$. If we want to block the collapse of propositional facts into true propositions, we can escape the accusation of begging the question only so long as we do not use our own linguistic theorisations as a serious tool for doing ontology, and can instead argue by other means. For principles like Fact Reference$_{Power!}$ are tools for displaying our ontological choices, not for making them.[19] We must come up with independent evidence—evidence independent of language—for whatever interesting property we ascribe to propositional facts but not to true propositions, and *vice versa*. Obviously, we can say all sorts of creative things about propositional facts. Even easier is just to say what other philosophers have already said about what such facts are and about how they are supposed to differ from propositions. Of course this should be done, but having *merely* done this gives us ill-founded reasons to insist that facts should be included in our ontology alongside true propositions. There is no reason to accept propositional facts.

Things like facts and propositions are *theoretical posits* justified by the metaphysical roles they play: This is why giving lists of characteristics that facts have and propositions do not—without arguing for those roles—is a definitory exercise, and will not be useful in metaphysics so long as no independent arguments are given for assuming (e.g.) propositional facts alongside true propositions in our ontology. And this is also why *Semantic Value* is the only option for the semantics of 'fact'.

So, for instance, whoever wishes to maintain that there are no facts but only true propositions needs just to show that nothing is lacking from our ontological inventory if we do not have facts alongside true propositions, i.e. to show that all salient roles allegedly played by facts can be played as well by true propositions. Which, again, does not mean that the *words* 'fact' and 'true proposition' play the same role: that would be a lethal category mismatch, on par with saying that the word 'mouse'

[19] Cf. Varzi (2002), Sect. 3, and end of Sect. 1: 'Let us just say that depending on what we think there is, we attach a meaning to what we say. Let us theorise explicitly about what there is rather than attribute our views to the language that we speak, and hence to the speakers who share our language. What would entitle us to do that?' cf. also Varzi (2007).

eats cheese.[20] Again, I am not saying that it *is* correct that true propositions can take up all the salient roles played by facts; if by 'all the salient roles' we mean every role played by facts in all possible theories of facts. Then, of course, the claim is trivially false. Nor am I saying that the *philosophical notion* of fact is the same as the *philosophical notion* of proposition.

So the best position with respect to the naming of true propositions, as to the naming of facts, is simply that there is no such naming: At most, we can say that true propositions are the semantic values of certain (namely, factive) that-clauses (which are no singular terms for them).

You may wonder: How can I say that there is no naming of facts (or propositions), that that-clauses are not singular terms? In Chap. 4 of Betti (2014a), I show that that-clauses are not singular terms by means of the following argument:

(I) Necessary conditions for an expression *x* to be a singular term (that is, an expression [purporting to] pick[ing] out exactly one object) are

(A1) *x* is substitutable by a coreferential singular term *salva veritate* and *congruitate*.
(A2) *x* is able to replace an individual variable in an open sentence in a first-order logical theory (i.e., a variable that can be bound by a nominal quantifier).
(A3) *x* is substitutable by a kind-restricted natural language particular quantifier.
(A4) *x* is able to function as structural subject of natural language sentences (NP is Spec, IP).

(II) That-clauses are not

(A1) Substitutable as A1 says
(A2) Replaceable as A2 says
(A3) Substitutable as A3 says
(A4) Able to function as A4 says

(III) Hence, that-clauses are not singular terms.

The details of the argument do not matter here. What is interesting is that I offer this argument inside a *reductio* and, that I myself find it, outside that *reductio,* actually most puzzling. There is something really strange going on in it: namely, that the characterisation *ad* A1–A4 is logico-linguistic, but successful reference cannot be a logico-linguistic matter: It is about the world. To see better what I am aiming at, consider this. The argument above is sound. But what if it were not? What if, in step 2, A1–A4 were, indeed, satisfied by that-clauses, so that the latter would turn out to be singular terms? Would 'that Bargle is choppier than Argle' be an expression referring to a fact, then? Well no, not even if A1–A4 were necessary and *sufficient*

[20] '"Mouse" is a syllable. Now a mouse eats its cheese; therefore, a syllable eats cheese.' Suppose now that I cannot solve this problem; see what peril hangs over my head as a result of such ignorance! What a scrape I shall be in! Without doubt I must beware, or someday I shall be catching syllables in a mousetrap, or, if I grow careless, a book may devour my cheese!" Seneca, *Epist. XLVIII*, Vol. 1.

conditions to be singular terms. Why is that? Because, again, we will not be able to successfully refer to something unless that something is *there*. For how can we refer to something if it is not there? Russell's theory of definite descriptions (which left us with a very limited set of singular terms) and Quine's criterion of ontological commitment (which left us with none) and the latter's ideas on the inscrutability of reference all make a strong case against the prima facie aspects of natural language in favour of the idea that in order to take a rabbit from a hat we must first put it there. Of course, this does not mean that taking rabbits from hats is not a respectable activity, but we should not fool ourselves in thinking that we did not put the rabbit there ourselves. It seems we must have the world in place before we can say anything about how we talk about it. If this is correct, then how can A1–A4 be remotely plausible? These claims just say that we can get to know whether an expression of natural language successfully picks out an object by inspecting either the translatability of that expression in a specific formal language, or the result of substitution of that expression with another expression of the same natural language, or its syntactic role as structural subject of sentence. Is not this strange? Honestly, I think it is, and the only sensible question to be asked here would be: Are there facts (or propositions) which can play the role of referents of that-clauses (if we deem that role necessary), or are there not? If there are facts, then that-clauses (or any other expression we might think suitable, such as 'the fact that *p*' in Hochberg's account) can hope to pick them out; if there are not, such hopes are vain. If this is correct, most of the discussion on linguistic arguments—taken as an effort to establish that propositional facts exist alongside propositions—is futile and hopelessly question-begging. If *no* notion of fact as an item at the level of reference is metaphysically acceptable (and I say it is not), then the effort to take our fact-talk at face value in some way is metaphysically worthless. Do you agree?

Some philosophers would be unwilling to drop a first-order account of that-clauses (the one mentioned in A2 above), unless they are given some alternative way to treat them formally. (I myself do not see any good ground for reasoning in this way, but it is quite widespread; I do not know whether you accept this view.) Such an alternative (*mutatis mutandis*) is given in Rosefeldt (2008). I have nothing to add here to what Rosenfeldt has proposed (cf. Rosefeldt 2008, p. 309), but what I find important to observe is that such an alternative amounts to no more than an acceptance of what I have called *Semantic Value*. This means that to accept Rosenfeldt's alternative to the semantics of that-clauses means to accept that the Quine-like criterion—the Argument from Nominal Reference—holds, again, *by stipulation*. What this means is that we abandon any natural language-driven analysis and just *decide* to model that-clauses formally in a first-order formal language (for instance in the way Parsons 1993 does). It is important to note that this means in fact renouncing reference to facts (and actually *both* definite and indefinite reference) based on natural language-based evidence. This is closer to Quine's original criterion: We can just decide (under some metaphysical constraints) what to put in our domain of quantification. Let us say, for instance, that you take your variables to range over propositions. This you can do, but only with the proviso that you can show *with other arguments* that we *must* assume propositions *because* there is noth-

ing in your ontology that is more able than propositions to play certain roles that must be played in any case (I leave open here what those roles could be). When you have done this, you can stipulate that propositions are what that-clauses 'refer to', in the sense that propositions are the stipulated semantic values of that-clauses; you can stipulate this, and nothing more.

3.5 Conclusion

In the preceding section, I have supposed a rather clear opposition between descriptive and revisionary strategies. But the position that you, Kevin, seem to favour is a position which seems to lie in the middle of these: You accept compositional facts, but still think it important, even necessary, to give an analysis of how we name them in natural language. So the question is: Would something like *Semantic Value* work for you? Or would you want something stronger? If so, why?

Let us consider a scenario involving compositional facts and *Semantic Value,* complicated by considerations from the history of facts (a complication that you might like). As is well known, some philosophers are convinced, following Armstrong, that we need facts to play the truthmaker role. So let us accept that this is the reason why we must accept compositional facts. We now can stipulate that 'fact' in natural language, at least in some uses, applies to these facts. We can now hold that facts as metaphysical posits have always been present in philosopher's theorisations—it just happens that the development of English is such that, at present, ordinary language includes a certain use of 'facts' that can be harmonised with it. One problem with this is that it is false: Facts were introduced into philosophers' theorisations only very recently (I show this in Betti 2014b). But this problem can be solved by saying that ordinary language includes, at present, a certain use of 'facts' that can be harmonised with facts as they have emerged recently in philosophers' theorisations (and which Armstrong calls 'states of affairs'). Would you put things like this? Is this 'harmonising' something you could agree to? Or would you want something stronger?

I do not think we need anything stronger. I should also say that in light of less costly and more elegant alternatives, it seems wrong to insist that we need facts to play truthmakers (I argue this in Betti 2014a, Chaps. 2, 3 and 4). But if we could show that we do need facts as truthmakers, we could design a language that does justice to our theory and thus contains a genuine predicate 'is a fact', which would apply truly to certain specific objects by stipulation. Note that this does not need to be a formal language: By this designed language, I mean just a language including technical terms apt to express our philosophical theorisations. The language in which this paper is written is not so far from a technical language of this kind. Facts are best regarded as the semantic value of certain expressions by stipulation: This is the sole acceptable methodological option as to the commitment of ordinary language to facts. In this case, we would take 'that *p* is a fact' to be true in a regimented language that matched an ontology of facts. One could take 'the fact that *p*' to be

analysed as Hochberg proposes, but in fact *any* other analysis, or any other naming ('naming' intended here as weakly as possible), would do: Why not '*A*'s being *b*'? What makes Hochberg's analysis *better*? When the link between natural and regimented or formal language is broken (and it can be argued that it is in fact *always* broken), then any choice would do: It is a stipulation; we just need to agree on what entities we are going to assume and how to talk about them. We just maintain that the semantic value of 'that *p*' (in some cases) and of 'the fact that *p*' are facts when *we* speak, no matter what natural language implies.

What do you think?

Love,

Arianna

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Chapter 4
The Truth About Predicates and Connectives

Johannes Stern

Abstract In his rich "The Truth Predicate vs. the Truth Connective. On taking connectives seriously." Kevin Mulligan (2010) starts an inquiry into the logical form of truth ascriptions and challenges the prevailing view which takes truth ascriptions to be of subject predicate form, that is a truth predicate applied to a name of a proposition or sentence. In this chapter we shall first discuss Mulligan's proposal from the perspective of linguistics and, especially, syntax theory. Even though theory of syntax provides little evidence for Mulligan's view, we shall argue that this does not disqualify the thesis that it is a truth connective (or operator as we shall frequently say) which figures in the logical form of truth ascriptions. We shall then look at the distinction between sentential predicates and sentential operators from a more logical point of view. It is often thought that we should opt for modal operators so the self-referential paradoxes are avoided. We argue that whether paradox will arise is not a question of grammatical category but of the expressive power of the approach.

Keywords Truth predicate versus truth connective · Modal predicates · Truth operator · Paradoxes of indirect discourse · Logical form

In his rich *The Truth Predicate vs. the Truth Connective*. *On taking connectives seriously,* Kevin Mulligan (2010) starts an inquiry into the logical form of truth ascriptions and challenges the prevailing view which takes truth ascriptions to be of subject predicate form, that is, a truth predicate applied to a name of a proposition or sentence. Rather than appealing to a truth predicate, Mulligan argues, we should account for the logical form of truth ascriptions using the "truth connective." To this end, Mulligan, in his genuine and original style, brings forward and merges arguments stemming from syntax theory, semantics, metaphysics, and Bolzano to

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substantiate his dictum that it is not the truth predicate but the truth connective "which wears the trousers" (cf. Mulligan, 2010, p. 567). In this chapter, we shall first discuss Mulligan's proposal from the perspective of linguistics and, especially, syntax theory. Even though theory of syntax provides little evidence for Mulligan's view, we shall argue that this does not disqualify the thesis that it is a truth connective (or operator as we shall frequently say) which figures in the logical form of truth ascriptions. This view can be supported by distinguishing between the grammatical and the logical form of a sentence. Moreover, as Mulligan notes, there is a similarity between truth and modal ascriptions, where in most formal treatments their logical form is very different, that is, truth is commonly treated as a predicate but the modalities are conceived as operators. We think that these notions should be treated in a uniform way, either both as predicates or both as operators. The prevailing philosophical view is that if truth and the modalities are treated as predicates, paradox will arise, though nothing of the like will arise when we opt for an operator treatment. We shall argue that the question of whether paradox will arise is somewhat orthogonal to whether we treat truth and the modalities as operators or as predicates. Rather, it is the expressive power of the framework which is at stake, when it comes to the paradoxes.

4.1 Language

In fact, Mulligan's inquiry is seemingly even more ambitious than outlined above as he does not ask the question what the underlying form of truth ascription is, but identifies the expression

(O) It is true that ___.

as an operator or connective. That is, Mulligan claims that O figures as a unit in English sentences and is an expression which takes sentences as arguments to form new sentences. On the contrary, according to Mulligan, the expression

(P) ___ is true.

takes names or terms to form new sentences and therefore should be considered as a predicate. This presupposes that it makes sense to classify natural language expressions into the categories "predicate" and "operator" which leads Mulligan to stipulate "that the categorial grammar of formal languages applies also to natural languages", especially English (cf. Mulligan 2010, p. 565).

Now, this assumption comes at a cost, namely if we wish to avoid trivialization, we should better come up with some theory or principled account of which expressions (within a grammatical sentence) are of which category and this account should provide an analysis of all English sentences or at least all sentences in which expressions of the type considered occur.

If we assume that (explicit) truth ascriptions in English employ either the truth predicate P or the truth operator O, Mulligan needs to argue that (i) all truth ascrip-

tions employing the truth predicate *P* can be accounted for by (or reduced to) some truth ascription using the truth operator *O* and (ii) that there is a principled analysis or theory of English grammar which takes the expression *O* to be a member of a category of expressions and which analyzes the grammatical function of *O* in a way which licenses the claim that *O* is a one-place sentential operator.[1]

Mulligan brings forward a battery of examples and considerations which purport to show (i), namely Mulligan intends to show that for every sentence employing the truth predicate *P,* there is a sentence employing the truth operator *O* which in some salient way is metaphysically prior to the former sentence.[2] Whereas we do not feel competent to comment on the metaphysical aspect of this thesis, it seems to involve the claim that we can translate every sentence of English employing the truth predicate into some sentence of English employing the truth operator where the latter sentence implies the former in some relevant sense. If this is right, however, sentences involving quantification into the argument position of the truth predicate and sentences where the truth predicate is applied to what Vendler (1967) called perfect nominals[3] are a serious trouble for his claim. In order to account for these sentences, it seems that Mulligan would need to argue that there are expressions of English which act like propositional variables and in the case of the quantified statements, quantifiers binding these variables. And it is less than clear whether such expressions exist in English. These problems, however, are well known from the "Prosentential Theory of Truth" (cf. Grover et al. 1975; Grover 1992) and we shall not discuss them here though propositional quantification will be of some importance in the remainder of the chapter.

Still, to even get off the ground, Mulligan needs to establish (ii), i.e., he needs to argue for a parsing of an English sentence as in

(1) $[\text{It is true that}]_{o}\,[\text{Kevin is wrong}]_{s}$

That is, Mulligan needs to provide a grammar which acknowledges *O* to be a member of a syntactic category which is, or can be, analyzed as a constituent of sentences like (1) and, moreover, the grammatical function of *O* should come out to be something like an operator.

For example, if one were to argue that the English word "and" is, when used to conjoin sentences, a (two-place) sentential operator, one could substantiate this claim by arguing that "and" belongs to the lexical category of conjunction words, and if "and" is used to conjoin two sentences to form a new sentence, it is consid-

[1] Of course, in principle, one needs to do the same with respect to the truth predicate *P*; however, we take it that Mulligan is not bothered by the question whether *P* is indeed a truth predicate.

[2] To be more precise, Mulligan's claim is that for every sentence *S* employing the truth predicate, there exists a sentence *S′* employing the truth operator only, such that

If S, then S because S′.

For more details, see Mulligan (2010, pp. 567–570).

[3] These are nominalized sentences in which the verb is dead and has become a noun as in "Goldbach's conjecture." Cf. Vendler (1967, pp. 122–46).

ered as a constituent of the latter sentence (cf. Van Valin 2001, pp. 130–31). Moreover, since "and" takes arguments of the same category (e.g., sentences) to form a new member of this category, its grammatical function can be considered to be an operator. More specifically, if "and" is used to conjoin sentences, it can be taken to be a sentential operator.

Unfortunately, no argument of the latter kind is forthcoming in standard theory of syntax with respect to Mulligan's truth operator, that is, the expression "it is true that" does not belong to a syntactic category and thus, *a fortiori* it cannot be a constituent of a sentence. Moreover, it also seems that even grammars which are not based on constituent-structure analysis do not attribute a grammatical function to the expression "it is true that" and thus do not recognize it as a truth operator (see Sells 1985; Van Valin 2001 for more on syntax theory). Rather, in most theories of syntax[4] "that Kevin is wrong" would be considered as a unit, namely as a complementizer phrase (CP). We shall not discuss the grammatical analysis of sentence like (1) in detail, but to our knowledge all standard accounts analyze the grammatical function of "true" or "is true" to be that of a predicate, that is, it takes terms as arguments to form sentences.[5]

Mulligan is well aware of the fact that mainstream theory of syntax does not provide any support for his view. He states:

> Modern linguistics has no place for a category of pure connective expressions such as "It is true that…". (See Mulligan 2010, p. 582)

This, however, overstates the case and seems to equate "modern linguistics" with "theory of syntax." While, as mentioned, it is true that pure syntactic analysis does not provide any evidence for the existence of a natural language expression which merits to be called a "truth operator," this does not exclude the possibility that certain natural language expressions should be treated as "truth operators" within categorial grammar. Differently put, the possibility of having "truth operators" within categorial grammar is ruled out only if it is assumed that theory of syntax can be presented as a categorial grammar, that is, the data produced by the theory syntax are assumed to fit the framework of categorial grammar without further modification.

However, this is a very strong assumption and probably a too strong assumption as it seems sensible to distinguish between pure grammatical form and logical form. For example, Higginbotham (1993) argues at some length for this distinction and states:

> Linguistic structure is a matter of grammar in the narrow sense; that is, a matter of what licenses certain combinations of words and other formatives as constituting a sentence of a language. But the concern of logical form is with the recursive structure of reference and truth. In distinguishing logical form from grammatical form we post a warning against the

[4] That is, in all constituent-structure grammars which accept the mainstream categories of constituents among which we have CP. All the different versions of Chomsky count as standard theory of syntax.

[5] It is important that "term" is not introduced semantically, i.e., as a referential expression. Whether a certain "term" is referential is a completely different issue.

> easy assumption that the referents of the significant parts of a sentence, in the ways they are composed so as to determine truth conditions, line up neatly with the words, in the way they are composed so as to make the whole well formed. (See Higginbotham 1993, pp. 173–74)

Clearly, there is no easy answer to the question of how grammatical form and logical form, or, differently put, syntactic structure and semantic structure are related, but it seems reasonable to understand (or to adopt an understanding of) categorial grammar to be concerned rather with the semantic structure, i.e., the logical form, of natural language. However, if this view is adopted, then there seems room for a parsing of English sentences like (1) into a truth operator and a declarative sentence despite the alternative parsing arising from the analysis of the linguistic structure of (1). After all, the linguistic structure of the sentence

(2) $2 + 2$ is not 4

does not match the standard account of its semantic structure according to which "not" is considered as a one-place sentential connective[6] and this has hardly convinced anyone to revise our common treatment and understanding of "not" as one-place sentential operator for negation.

However, the fact that conceiving of "it is true that" as a truth operator is not outruled by evidence to the contrary from theory of syntax does by no means establish that "it is true that" is correctly conceived as such. This would require a principled analysis or theory explaining the transformations taking place in the transition from grammatical to logical form, or from syntactic to semantic structure. Consequently, to substantiate his view, Mulligan would need to provide an analysis of this transition. For otherwise, his thesis, i.e., that the expression "it is true that" should be analyzed as a truth operator of English, remains some wild speculation without any evidence in its support.

While Mulligan falls short from providing such a principled account, he correctly hints at an asymmetry in the treatment of modal notions and truth. On the face of it, e.g., necessity and truth behave alike from a linguistic perspective, that is, as in the case of truth we find linguistic constructions employing what Mulligan would call the necessity operator, i.e., "it is necessary that" as well as the necessity predicate "is necessary."[7] This observation can be generalized to a broad class of modalities and even propositional attitudes though the data is slightly different in this case.

[6] This is certainly true with respect to the analysis of the linguistic structure of (2) provided by constituent structure grammars, that is theory of syntax of the Chomskian making. The situation seems to be somewhat different in, e.g., "Role and Reference Grammar" where "not" is even called an "operator" in the analysis of the linguistic structure (see Van Valin 2001, pp. 205-18). We are not sure whether this supports an understanding of 'not' as a one-place sentential operator. It is worth noting that opposed to the Chomskian research program Rule and Reference Grammar does not stipulate the autonomy of syntax.

[7] However there seems to be one difference between truth and the modalities which has been noted by Mulligan (2010, pp. 676–677). For the modalities we can transform sentences appealing to what Mulligan would call operators into seemingly synonymous sentences using the adverbial counterpart of the operator (cf. 'it is necessary that p' and 'necessarily, p'). However, the adverbial counterpart of true, i.e. truly, does not seem to be synonymous with the truth operator.'

Still, in prominent systems of categorial grammar arising from Montague's work, modalities are treated as sentential operators[8] and thus the question arises why we should not treat truth alike?

4.2 Logic

This asymmetry between the treatment of truth and the modalities within categorial grammar and logic does not only seem puzzling from a linguistic and philosophical point of view, but it also causes several problems with respect to the logical form of principles connecting truth and the modalities. Thus, as we shall see, treating truth and the modal notions alike, whether as operators or as predicates, does not only resolve the asymmetry between the two, but it also has real advantages compared to a heterogeneous treatment of these notions and therefore, it is desirable from a philosophical and logico-semantical perspective.

For given a uniform treatment of truth and modalities, common puzzles with respect to the logical form of linking principles would disappear. Consider a sentence like

(3) If it is necessary that $2 + 2 = 4$, then it is true.

If one takes necessity to be aptly treated as an operator but conceives of truth as a predicate, the semantic issue arises to what the pronoun "it" in "it is true" refers to. In this particular case, the "it"-pronoun clearly seems to work anaphorically and if truth is conceived as a predicate the pronoun needs to refer to a previously designated object. However, if necessity is conceived as an operator, no object will be designated in the antecedent sentence.

Similar and even more pressing problems arise when we consider principles involving quantification as, e.g., a generalized version of (a), namely

(4) Everything that is necessary, is true.

Conceiving of necessity and truth as predicates, we can easily formalize (4) in first-order logic by the following:

(5) $\forall x\ (Nx \rightarrow Tx)$

Similarly, if we work in an operator setting, that is, we treat both necessity and truth as operators, then we can also provide a straightforward formalization as long as we allow for propositional quantifiers in our language. (4) would then become

(6) $\forall p\ (\Box p \rightarrow Tp)$

[8] Even though this is essentially correct it oversimplifies the situation. See Thomason 1974 for an exposition of Montague's work.

But assuming necessity to be aptly formalized as an operator but truth as a predicate, we end up with

(7) $$\forall p\ (\Box p \rightarrow T[p])$$ [9]

This, however, cannot be considered as a formal rendering of (4) as long as the quantifier is understood referentially since the quantifier does not bind the argument position of the truth predicate. Rather in the argument position of the truth predicate, we have a name of the propositional variable *p*. We end up in a similar muddle if we conceive of the necessity as a predicate but take truth to be an operator. Thus if we treat truth and modal notions in a nonuniform way, we need to give an account of the quantifier occurring in (4).

An obvious way to do this is to posit an overt "___expresses proposition___" relation and to posit that the natural language quantifier "everything" actually triggers quantification over individual and propositional variables:

(8) $$\forall x \forall p\ (\Box p \wedge \mathrm{Expr}(x, p) \rightarrow Tx)$$

An alternative is to introduce a device which provides a name for every proposition and thus introduces a standard name for every proposition. Let "$Q(*)$" be such a subnector,[10] then (4) can be formalized as

(9) $$\forall p\ (\Box p \rightarrow T\ Q\ (p))$$

Where these are at least *prima facie* possibilities to account for quantification, if truth and modalities are treated heterogeneously, they are completely *ad hoc* in character and there is a real issue that how the introduction of these devices can be motivated. And this problem is even more pressing as there is a principled and motivated account of the logical form of these linking principles, namely to treat truth and the modalities in a uniform way. As we have seen, this would resolve the problem of quantification and would equally make sense of the functioning of the "it" pronoun in sentences like (3).

4.2.1 Operators, Predicates, and Paradoxes

Accordingly, there seems to be at least some motivation to revise the received view and to treat either truth as an operator or the modal notions as predicates.[11] And for

[9] [*p*] stands for a name of the propositional variable p.

[10] Belnap 1975 introduces this terminology for operators which take propositions as arguments to produce terms of the language. In English expressions like 'that' or 'the proposition that' might be considered to be such subnectors.

[11] There is of course a further option which has been propagated by Kripke 1975, Reinhardt 1980 and more recently Halbach and Welch 2009 which takes modalities to be aptly formalized by

many philosophers, treating truth as an operator as proposed by Mulligan might then seem the right way to go, for Montague's "Syntactical Treatments of Modalities" (1963) is commonly considered as showing that predicate accounts of modality lead to paradox. Moreover, by treating truth as an operator, it seems that the semantical paradoxes with respect to truth are avoided likewise, for Montague's theorem can be considered as a variant of Tarski's undefinability theorem, whereas Tarski's undefinability theorem shows that for sake of inconsistency there cannot be a predicate α for which the principle

(TB) $$\alpha(\overline{\mathrm{gn}(\phi)}) \leftrightarrow \phi$$

comes out true where "*gn*()" is taken to be the function that assigns to every expression of the language its Gödel number and "$\overline{\mathrm{n}}$" the numeral of a number *n*. Montague showed that the right-to-left direction of the above biconditional could be replaced by the corresponding rule, that is, he showed that no predicate α could be consistently characterized by

(T) $$\alpha(\overline{\mathrm{gn}(\phi)}) \leftrightarrow \phi$$

(Nec) $$\frac{\phi}{\alpha(\overline{\mathrm{gn}(\phi)})}$$

Once truth or the modal notions are treated as operators, at least prima facie, nothing alike these undefinability results is forthcoming. In other words, if truth is conceived as a one-place sentential operator □, it can be governed by (TB), i.e.,[12]

(10) $$\Box\phi \leftrightarrow \phi$$

and thus modal operators can be characterized by operator versions of (*T*) and (Nec). The reason for this asymmetry between operator and predicate is due to the fact that Gödel's diagonal lemma is applicable within the predicate setting only. In its parameter-free version, Gödel's diagonal lemma asserts that in any theory *T* extending elementary arithmetics, for every formula $\varphi(x)$ with at most *x* free in φ, there exists a sentence δ such that *T* proves

(11) $$T \vdash \phi(\overline{\mathrm{gn}(\delta)}) \leftrightarrow \delta$$

---

modal operators and truth by a predicate, but takes the occurrence of 'necessary' in (4) to be short for 'necessarily true' or 'true necessarily', that is (4) would be formalized as

$$\forall x\ (\Box \mathrm{T}x \rightarrow \mathrm{T}x)$$

Obviously, this also resolves the so-called quantification problem. See Halbach and Welch 2009 for more on this strategy.

[12] 12 And trivially so, for e.g. read '□' as '¬ ¬'.

By applying Gödel's diagonal lemma to the formula $\alpha(x)$, we may obtain the formal liar sentence which asserts of itself that it is not true (i.e., that it is not α)

$$(\lambda) \qquad \neg\alpha(\overline{\mathrm{gn}(\delta)}) \leftrightarrow \delta$$

λ is clearly inconsistent with (TB) and, as Montague (1963) showed, so it is with (T) and (Nec). The application of the diagonal lemma to the formula $\alpha(x)$ is possible, since the argument position is a term position and not a sentential position as it is, if we conceive of truth and the modal notions as operators. Nothing like the diagonal lemma is forthcoming within the operator setting and thus at least prima facie the operator approach to truth and modalities seems to be on the safe side when it comes to the semantical paradoxes like the liar paradox.

To be sure, this feature has been brought up in favor of accounts inspired by Ramsey's redundancy theory of truth. Most of these accounts dispense of a truth predicate which allows for diagonalization and thus block the construction of the liar sentence. The prosentential theory of truth is but one example where from a formal point of view the truth predicate is substituted for propositional variables and propositional quantification. The prosentential theory of truth can essentially be considered as an operator conception of truth as it does away with the need of names for sentences of the language but instead introduces variables that occupy sentence position and this is essentially what happens within the operator account. According to Frápolli (2005), e.g., the prosentential theory of truth avoids the liar paradox[13] which she takes to be a strong point in favor of the theory:[14]

> The prosentential theory of truth accepts the paradox of the Liar for what it is, a linguistic muddle, and shows why it is not a real problem for a theory of truth. (see Frápolli 2005, p. 132)

4.2.2 Quantification and the Paradoxes of Indirect Discourse

However, avoiding the paradoxes has a price, namely that of severely restricting the expressive power of the framework. The operator approach avoids the paradox by virtually banning all "self-reference" from the language no matter whether the self-reference under consideration is of the vicious kind or not. In this respect, the operator approach is suspect to the same critique Kripke (1975) brought forward against Tarski's theory of truth. For, if we consider Kripke's example,

(12) All of Nixon's utterances about Watergate are false.

[13] Of course, any reasonable theory of truth should avoid the paradox for sake of consistency. However, in this case we cannot formulate the paradoxical sentences.

[14] Similar remarks can be found in Grover 1992. But see Grim 1991 for a critical discussion. We shall comment in the same vein.

then it seems that we should be able to, at least, formulate the sentence, no matter whether this sentence turns out to be paradoxical or not.[15] But in the operator framework, paradoxical sentences cannot be formulated.

Kripke's example also raises the issue of quantification. First, in order to formulate sentences like (12), we need to introduce propositional quantifiers, which will move us beyond the first-order setting as propositional quantification is essentially second order. Second, and more importantly, once we have propositional quantification at our disposal, Kripke's example suggests that an adequate treatment of the propositional quantifiers might reintroduce the paradox, because depending on what Nixon uttered the interpretation of the quantifier might depend on the truth and falsehood of the statement itself.

Basically, this observation was exploited by Prior (1961) who discussed several paradoxes arising in modal operator languages equipped with propositional quantifiers. These paradoxes, even though closely related to the liar-like paradoxes, are paradoxes of indirect discourse and therefore differ from the semantic paradoxes in their canonical presentation. In their simplest variant, they follow the outlines of the Epimenides paradox. These paradoxes have not received as much attention as the paradoxes of direct discourse, that is the liar-like paradoxes, but have been discussed by Prior (1961), Thomason (1974), Burge (1984a, b), and Asher (1990).[16]

Let us consider the language which is a propositional modal language with a truth operator T and one modal operator ‡, propositional variables $p, p', \ldots$ and propositional quantifier ∀. For expository ease, we read the modal operator as "Onephrase asserts that." We set up a hypothetical situation as follows:

a. Onephrase asserts that everything Onephrase asserts is not true.
b. This is the only assertion Onephrase ever makes.

But given this setup, (i) can be formalized in by means of propositional quantification as follows:

(13) $$‡\forall p\,(‡p \rightarrow \neg Tp)$$

and (ii) gives rise to the following assumption in

(14) $$\forall p\,(‡p \rightarrow (p \leftrightarrow \forall p\,(‡p \rightarrow \neg p))$$

Assuming (13), (14), and the standard logic of quantification, we can derive a contradiction:

Since by the operator version of (TB), i.e., (10), we can infer

[15] At least, if we want to deal with truth in English, not some purified variant of English, and intend to provide a formal treatment thereof.

[16] Asher 1990 as well as Belnap and Gupta 1993 allude to a never published manuscript "Paradoxes of Intentionality?" as principle source of inspiration. More, recently joint work of Thomason with Tucker 2011 entitled "Paradoxes of Intensionality" appeared in the Review of Symbolic logic.

(15) $\ddagger\forall p\,(\ddagger p \rightarrow \neg p)$

from (13). We can then derive the inconsistency as follows:

1.	$\forall p\,(\ddagger p \rightarrow \neg p) \rightarrow \big(\ddagger\forall p(\ddagger p \rightarrow \neg p) \rightarrow \neg\forall p(\ddagger p \rightarrow \neg p)\big)$	(UI)
2.	$\forall p\,(\ddagger p \rightarrow \neg p) \rightarrow \neg\forall p\,(\ddagger p \rightarrow \neg p)$	1,(15)
3.	$\neg\forall p(\ddagger p \rightarrow \neg p)$	2
4.	$\ddagger p \wedge p \rightarrow \forall p\,(\ddagger p \rightarrow \neg p)$	(14),(UI)
5.	$\exists p\,(\ddagger p \wedge p) \rightarrow \forall p\,(\ddagger p \rightarrow \neg p)$	4,(EG)
6.	$\forall p\,(\ddagger p \rightarrow \neg p)$	5
7.	$\bot$	3,6.

Whereas in the case of the Epimenides paradox, the paradox is for the most part blamed on the modal properties of the truth predicate, it is not clear whether in the present case there is any point in blaming the truth operator since

(i') Onephrase asserts that everything Onephrase asserts is not the case.

seems to support (15) directly without appealing to (TB). But then, on the face of it, the paradoxical conclusion seems very puzzling as we have not made any assumption on behalf of the truth or the modal operator and simply assumed the ordinary laws of quantification. One might take this to be a vindication of the predicate approach to truth and the modal notions, since in the predicate setting the liar-like paradoxes depend crucially on the properties of the truth predicate or the modal predicates, whereas in the operator setting it is quantification *simpliciter* that leads to paradox.

But this conclusion might be a bit premature as there are consistent modal logics with propositional quantifiers.[17] Whether propositional quantification will lead to inconsistency depends on whether we take the initial, hypothetical scenario to be a possible one which in turn relies on how fine-grained we individuate propositions or, more generally, the objects of our modal attributions and to what extent the structure of these objects is transparent *within* the approach. If the hypothetical scenario is ruled out, we can consistently extend the modal logic under consideration by propositional quantification. Most prominently, the individuation of propositions as sets of possible worlds allows for consistent modal logics with propositional quantification where these quantifiers range over sets of possible worlds. Similarly, approaches taking propositions to be entities sui generis and limiting the structur-

[17] From a formal point of view a logic with a truth operator governed by (TB) is nothing but a modal logic. In fact, it is the trivial modal logic where the modal distinction collapses. Here and in what shall come the term "modal logic" is meant to include the truth operator logic.

al information available with respect to these entities will allow for propositional quantification.[18]

Still, while we might have some quarrels with respect to the above scenario, we should be careful trying to dissolve the paradox by dismissing the hypothetical situation as more plausible scenarios can be constructed and thus the dismissal has counterintuitive consequences. Asher (1990) presents the following example:[19]

> Suppose Prior is thinking to himself:
> (Pr) Either everything that I am thinking at the present moment is false or everything Tarski will think in the next instant, but not both, is false.

Clearly, if Prior thinks (Pr) to himself at t_0 and Tarski thinks that $2+2=5$ to himself at t_1 there will be nothing paradoxical and thus the fact that Prior thinks (Pr) and nothing else to himself does not constitute a problem in this situation. But if Tarski thinks, e.g., that Snow is white to himself at t_1, we end up in paradox. Still, it seems counterintuitive to react toward this paradox by stipulating that it is impossible that Prior thinks (Pr) and nothing else at t_0 where Tarski thinks that Snow is white and nothing else at t_1.[20] This suggests that we should take the paradoxes of indirect discourse seriously and not try to resolve them by dismissing the hypothetical scenario which we will call—following Asher (1990)—a *Prior situation*.

Intuitively, to properly evaluate Prior situations, propositions need to be able to refer back to themselves as this is part of the content of (Pr), i.e., of what (Pr) asserts, and thus an adequate individuation of propositions should be capable of expressing self-reference. But if propositions are individuated appropriately in this respect, propositional quantification, as argued, will have troublesome consequences. The reason for this is that the propositional quantifier is—and again we concur with Asher (1990)—a surrogate of the truth predicate. That is, using propositional quantification, we can quantify directly into sentence position and thus generalize over sentences. In a first-order setting, this can be done only if syntactical predicates, i.e., predicates like the truth predicate that apply to names of sentences or propositions, have been introduced into the language, for instance, the truth predicate and we know that in the presence of syntactical predicates like truth care has to be taken in order not to run into the paradoxes of direct discourse. However, by means of propositional quantification, we can generalize over sentence position without appeal to a truth predicate. For example, we can state a quantified version of the law of excluded middle in the following way:

(16) $$\forall p(p \vee \neg p)$$

[18] Cf. Thomason 1980 for an approach along this line.

[19] The general pattern of the example is apparently due to Jean Buridan but was rediscovered and discussed by Prior 1961.

[20] Moreover, since given the temporal ordering this would imply that if Prior thinks (Pr) to himself at t0 Tarski cannot think that Snow is white to himself at t1 which seems an absurd consequence. For more on this see Prior 1961 and Thomason and Tucker 2011.

Moreover, when we analyze the role of the propositional quantifier in the paradox of indirect discourse, it becomes obvious that we face a similar problem as in the case of the liar paradox, for suppose we try to evaluate whether "$\forall p\,(\ddagger p \rightarrow \neg p)$" is true. Intuitively this sentence is true, if and only if, for all propositions *P,* if Onephrase asserts that *P,* then *the* proposition that *P* is false. But this seems to depend on whether *the* proposition that $\forall p\,(\ddagger p \rightarrow \neg p)$ is true unless there has been a proposition *P* to falsify "$\forall p\,(\ddagger p \rightarrow \neg p)$." However, if *the* proposition that $\forall p\,(\ddagger p \rightarrow \neg p)$ were true, we would have found a proposition *P* which Onephrase asserts and which is true and "$\forall p\,(\ddagger p \rightarrow \neg p)$" would be false. Thus, it seems as if we have ended in a circle similar to the one we encounter in connection with the liar sentence λ where the truth of $\overline{Tgn(\lambda)}$ relies on whether λ, that is $\neg\,\overline{Tgn(\lambda)}$, is true.

If this analysis is correct, it is not surprising that propositional quantification leads to contradiction provided the structure of the propositions is relevant with respect to their evaluation. Since propositional quantification appears to be a surrogate of the truth predicate, instantiating a universally quantified formula has a similar effect as disquotation in the case of the truth predicate. And we know that in the case of the truth predicate, we cannot adhere to an unrestricted principle of disquotation, that is (TB), since in the standard setting self-referential statements can be formulated. If the modalities are treated as operators, the paradoxes of indirect discourse seem to suggest that we have to give up classical logic of quantification.[21]

Although clearly one might argue that in the case of truth and salient modal notions such as necessity we are not in need of a fine-grained individuation and especially that there is no need for the structure of these entities to be transparent within the approach. Accordingly, one might try to work with a more coarse-grained individuation of propositions, but the need for a uniform treatment of truth and all modal notions suggests that strategies of the latter kind for avoiding the paradox do not amount to a viable solution.[22] The moral of this observation seems to be that there is no escaping from the paradoxes independently of whether truth and the modal notions are treated as predicates or operators as long as we can quantify into the argument position of truth and the modal notions and provide an account of quantification and truth and modality which is adequate from a natural language perspective. It also seems worth noting that the paradoxes of indirect discourse are a real threat to operator accounts of truth and modalities, and the operator accounts should have a good answer toward these paradoxes—exactly like accounts which conceive of truth and the modalities as predicates need to have a good answer toward the paradoxes of direct discourse, i.e., the liar-like paradoxes.

[21] Asher 1990 provides an inductive theory of propositional quantification which is based on Kripke's theory of truth and which leads to replacing the axiom of universal instantiation by the corresponding rule of inference. A less drastic move would be to opt for a free logic of propositional quantification, but it's not clear whether this really amounts to a viable alternative. Asher suggests that such a proposal would run into serious trouble with respect to anaphora (cf. pp. 22–23).

[22] Even if one were to allow for a heterogeneous treatment, the need to account for sentence similar to (4), i.e. Everything Nixon asserts is false, would force the introduction of an "expresses" relation or a "subnector" which would reintroduce the paradox anew.

It seems that there is a more general lesson to be learned. Independently from quantification, the capacity of referring back to certain assertion—if not the assertion itself—seems to be highly desirable from a natural language perspective. Natural language possesses devices as demonstratives, anaphora, and, more generally speaking, pronouns which are designed to refer to other expressions of the language and sometimes to the very expression itself. These devices have the effect of reifying assertion, sentences, or propositions. That is, these devices transform assertions, sentences, or propositions into objects of discourse. Objects we can then speak about.

This view can be supported by the fact that the paradoxes are no isolated phenomena of formal languages but may be formulated within natural language as can be witnessed by the following reconstruction of the paradox of the knower.

Consider the sentence

"I don't know this sentence"

and call it KN. Now, let us assume that I know KN. Then by the factivity of knowledge, i.e., the fact that everything that is known is the case, I can infer KN. But KN says that I do not know *this sentence*. But *this sentence* just is KN and hence I do not know KN. We have derived a contradiction starting from the assumption that I know KN. Accordingly, it seems sound to conclude that I do not know KN and even more it seems that I have just produced an impeccable proof to the effect that I do not know KN. But then, since I have proven that I do not know KN, I seem licensed to conclude that I know that I do not know KN. Thus, I know the sentence that I do not know KN. But *the* sentence that I do not know KN is just KN itself and therefore I can conclude that I know KN and we have ended up in contradiction.[23]

This natural language reconstruction of the paradox seems to crucially involve the capacity of natural languages of naming, i.e., reifying, sentences using (demonstrative) pronouns. But clearly both the capacity of naming and the capacity of referring to previously introduced objects of discourse via pronouns play a crucial role within natural language and thus to deprive a formal account from similar resources is to seriously cripple the account.

The moral to be drawn, if we are not willing to take a revisionist stance toward natural language, seems to be that we should be suspicious toward any "solution" toward the paradoxes which comes at the price of limiting the expressive power of the framework. A more sensible approach would try to locate the source of the paradoxes not within language, but within reasoning.

4.3 Conclusion

Even if one is not convinced by Kevin Mulligan's view on truth and does not find his arguments compelling, one should appreciate that Kevin Mulligan has pointed toward an asymmetry in the way we conceive of modalities as opposed to truth

[23] Cf. Tymoczko 1984 for reconstructions of the paradoxes along these lines.

which does not seem warranted by the data, be it from syntax theory or semantics (or maybe metaphysics).

In the absence of good arguments in favor of this asymmetry, revising the received view which treats truth as a predicate but the modalities as operators seems an adequate strategy and conceiving of truth as an operator is one possible way to go. Conceiving of the modalities as predicates is another way.

It is sometimes thought that operator accounts of truth and the modalities are on the safe side when it comes to paradoxes but we have argued that this opinion is somewhat ill founded. If the aim is to provide an adequate account of truth and the modalities within natural language, especially English, any account, no matter whether it treats truth and the modalities as predicates or operators, will have to face the paradoxes at some stage. Therefore, the paradoxes should have no bearing on the decision of whether to treat truth and the modalities as predicates or operators. That is to say, the question of paradox is orthogonal to the question of whether it is the truth predicate or the truth operator which wears the trousers.

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Chapter 5
Truth-Makers and Convention T

Jan Woleński

Abstract This chapter discusses the place, if any, of Convention **T** (the condition of material adequacy of the proper definition of truth formulated by Alfred Tarski) in the truth-makers account offered by Kevin Mulligan, Peter Simons, and Barry Smith. It is argued that although Tarski's requirement seems entirely acceptable in the frameworks of truth-maker theories at first sight, several doubts arise under a closer inspection. In particular, **T**-biconditionals have no clear meaning as sentences about truth-makers. Thus, the truth-maker theory cannot be considered as the semantic theory of truth enriched by metaphysical (ontological) data. The problem of truth-makers for sentences about future events is discussed at the end of this chapter.

Keywords Bivalence · Logic · Metalanguage · Metalogic · **T**-biconditionals

Since Convention **T** is a very important ingredient of the semantic theory of truth, every comparison of Tarski's construction with other approaches to the concept of truth must, sooner or later, discuss the equivalence:

(1) *S* is true if and only if *A**,

where *A* is a sentence in an interpreted (this qualification is important, because it dispenses us with worries whether propositions or sentences function as bearers of truth) language **L**, *S* is a name of this sentence and the symbol *A** refers to embedding, for example, via translation, of *A* into a metalanguage **ML**. Convention **T** requires that any materially correct truth-definition **Df** logically entails every instance of (1), that is, the specialization of this scheme for an arbitrary sentence of **L**; such concrete equivalences are called **T**-sentences, **T**-biconditionals, or **T**-equivalences. Note that **T**-sentences are something more than usual material equivalences, because we have $\mathbf{Df} \vdash B$, for any *B* being an instance of (1) (see Woleński 2008 for a discussion of this problem). According to Tarski, (1) does not constitute a truth-definition, although it can be considered as a partial one. Take the content of the sentence *A* as the set of all its consequences, formally $\mathbf{Cont}(A) = Cn(\{A\})$. Clearly, $\mathbf{Cont}(\mathbf{Df}) > B$. In fact, the content of **Df** exceeds the collection (rather the content) of all instantiations of (1), because truth-definitions usually contain elements

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(expressions) which do not occur in **T**-sentences, for instance, terms borrowed from set theory, like "the empty set" or "sequence" as in the case of the semantic definition of truth. Another argument that (1) cannot serve as an adequate truth-definition is that it holds for falsehoods as well.

Kevin Mulligan, Peter Simons, and Barry Smith (MSS for brevity) claim in their seminal paper (see Mulligan et al. 1984, 10–11; page-reference to 2007 reprint) as follows:

> Putnam […] has argued that Tarski's theory of truth, through its very innocuousness, its eschewal of "undesirable" notions, fails to determine the concept it was intended to capture, since the formal characterization still fits if we reinterpret "true" to mean, for instance, "warrantedly assertable" and adjust our interpretation of the logical constants accordingly. Putnam's conclusion […] is that if we want to *account* for truth, Tarski's work needs supplementing with a philosophically non-neutral correspondence theory. If we are right that the Tarskian account neglects precisely the atomic sentences, then its indeterminacy is not surprising. […]. If as we suggest, the nature of truth is underdetermined by theories like that of Tarski, then an adequate account of truth must include considerations which are other than purely semantic in the normally accepted sense. Our suggestion here—a suggestion which is formulated in a realist spirit—is that the way to such a theory lies through direct examination of the link between truth-bearers, the material of logic, and truth-makers, that in the world in virtue of which sentences or propositions are true.

Although MSS modestly call their proposal a mere suggestion, the actual task of introducing the concept of truth-makers seems to be much more ambitious, namely offering at least an outline of a full-blooded theory of truth, in particular, metaphysically grounded. In fact, their paper inaugurated a considerable and hot discussion (see Armstrong 2004, and the papers in Beebee and Dodd 2005, Monnoyer 2007, Loewe and Rami 2009).

Disregarding the details of Putnam's criticism of Tarski (however, see Woleński 2001 for a defense of the semantic definition of truth against Putnam's arguments), I will investigate how MSS's account of truth is related to that of Tarski. More precisely, I will discuss an application, if any, of Convention **T** when truth-makers are used in an explanation of the concept of truth. Two interpretations of the quoted passage are possible. Firstly, the concept of truth-maker supplements the vocabulary of Tarski's theory. Such a reading seems to assume that although Tarski's account correctly captures very general properties of truth, it requires additional conceptual resources in order for the indeterminacy noted by MSS to disappear. If so, Convention **T** should be fully preserved. Secondly, introducing truth-makers as a notional device leads to a different truth-definition which partially or even entirely is at odds with the semantic account. In this case, however, Convention **T** can be rejected, modified, or preserved in its full form. Each of these three possibilities should be excluded in advance; Tarski himself did not claim that his definition of truth satisfies only the requirement of material adequacy established by Convention **T**. MSS's literal formulations tend to be closer to the first option, because they explicitly postulate supplementing the typical semantic machinery by "a philosophically non-neutral correspondence theory" in order to achieve a determination of truth theory. This could suggest that formal semantics cum metaphysics (realist in the version of MSS) represented by the concept of truth-makers provides a fully determinate, that

is, ontologically involved, theory of truth. Yet, and this circumstance suggests the second interpretation as also possible, MSS characterize "an adequate account of truth" as a philosophical construction that "must include considerations […] other than semantic in the normally accepted sense." The meaning of the context "considerations which are other than purely semantic in the normally accepted sense" can be understood as referring to a theory radically opposed to that offered by Tarski. I will argue that MSS offer a theory which cannot be regarded as the semantic account of truth supplemented by a certain amount of metaphysics.

Alfred Rami (see Rami 2009, 3) proposed the following general characterization of truth-maker theories (I deliberately disregard all appeals to the truth-making relation as a necessary connection). All assume the so-called truth-maker principle in the following form:

(2) For every *x, x* is true if and only if there is a *y* such that *y* is a truth-maker for *x*.

This statement implies:

(3) For every *x,* if *x* is true, then *x* has a truth-maker;

(4) For every *x,* if *x* has a truth-maker, then *x* is true.

Implication (2) expresses truth-maker maximalism, but (4) is the principle of truth-maker purism. If we combine (3) and (4), we obtain

(5) For every *x, x* is true if and only if *x* has a truth-maker,

which is a more convenient formulation of (2), at least for my considerations in this chapter. In order to neutralize semantic antinomies, (5) should be rewritten as the scheme:

(6) *S* is true if and only if a sentence named by *S* has a truth-maker.

This equivalence can be regarded as generating formulas very close to **T**-sentences. Perhaps we can introduce the name "**TM**–biconditionals" as a label for instances of (6). Consider the sentence (i) "snow is white." Assume that English supplemented by a simple mathematical notation serves as a metalanguage. The related **T**-equivalence for the sentence in question can be written as

(7) The sentence "snow is white" is true if and only if **snow** $\in$ **WHITE,**

where the word **WHITE** refers to the set of white entities. The right side of (7) translates the sentence (i) into the chosen metalanguage; this is the language of very elementary algebra of classes supplemented by logical constants and syntactic devices allowing us to form names of sentences belonging to the object language. This translation can even be interpreted as pointing out a truth-maker for the sentence in question. Thus, the affinity between **T**-equivalences and **TM**-biconditionals is striking (see Smith and Simon 2007, 80–81 for an opposite view).

Rami observes then that a truth-maker theory does not need to accept both statements (3) and (4). Speaking more precisely, he argues that it is fairly possible to accept truth-maker purism without being committed to truth-maker maximalism. On the other hand, Rami qualifies (4) as an analytic truth. His argument makes use of a *reductio ad absurdum*. Assume that *A* has a truth-maker, but it is untrue. If *A* has a truth-maker **tm**, it is true in virtue of it. However, by assumption *A* is not true. Thus, *A* is true and untrue, which is impossible. In fact, MSS reject (3) in its

full generality (see also Mulligan 2007, Smith and Simon 2007) and replace it by a restricted principle

$$(8) \quad \mathrm{A} \vdash \exists \mathbf{tm}(\mathbf{tm} \Vdash \mathrm{A}),$$

which can be read "that A is true entails that there is a truth-maker **tm** making A true." The principle (4) has the form:

$$(9) \quad \mathbf{tm} \Vdash A \vdash A,$$

and its meaning is captured by the statement "what is made true, is true." Although (8) and (9) implicitly use (1), this fact is not essential, because one can replace A by "A is true" or "it is true that A" without making any appeal to **T**-biconditionals.

If someone accepts the maximalist truth-maker theory as David Armstrong does (see Armstrong 2004), that is, with (3), introducing a surrogate of Convention **T** (note that Armstrong does not take this step) no major problem arises. Let the symbol **TMT** refer to such a truth-maker theory. We can claim that **TMT** is materially adequate if and only if it entails every instance of (2) or (6), that is, a **TM** biconditional for any sentence. The issue looks differently in the case of the MSS account. Denote their theory by **TMT'**. First of all, (8) restricts the set of **TM**-equivalences to atomic sentences and some other cases, for instance, conjunctions of sentences which are simultaneously made true by the same objects as truth-makers. The restricted **TM**-scheme is expressed by

$$(10) \quad A(\text{is true}) \Leftrightarrow \exists \mathbf{tm}(\mathbf{tm} \Vdash A).$$

Unfortunately, we have no simple way to formulate a counterpart of Convention **T** for **TMT'**. The problem is that the limitations of (1) are extralogical in character and depend on a tension between the truth-functional (extensional) and the mereological character of truth-makers. Hence, the scope of the existential quantifier in (10) is not precisely established in advance. The situation is even much worse, because we do not know which elements of **TMT'** imply the correct **TM**-equivalences. Perhaps, this situation motivated Barry Smith and Jonathan Simon (see Smith and Simon 2007, 97) to their diagnosis that we should not define truth via truth-makers, because this task is simply unrealizable. Although **TMT**' justifies some, mostly very simple or elementary, **T**-conditionals, no generally formulated condition of its material adequacy, similar to Convention **T**, is available. Hence, **TMT'** cannot be regarded as a metaphysically improved semantic theory of truth. It should be considered as an alternative to Tarski's account.

Finally, I would like to make some remarks about the status of (3) and (4). There is a simple argument that the latter is analytic or even a theorem of (meta)logic, but the former is not. In order to make the argument easier, let me rewrite both formulas as

$$(11) \quad \mathbf{T}A \Rightarrow A.$$

$$(12) \quad A \Rightarrow \mathbf{T}A.$$

Formula (11) (see, for example, Turner 1990) is frequently adopted as one of the axioms of the logic of truth, when truth operates as a modality, but (12) is either rejected for its role in generating the Liar paradox or suitably modified as in (1). However, another motivation for rejecting (12) as universally valid can be given. This motivation is completely independent of the problem of semantic antinomies. Suppose that a three-valued logic, for example, Łukasiewicz's logic, functions as the basic system. Take a valuation **v** such that $\mathbf{v}(A) = \frac{1}{2}$. Clearly, the metalogical statement '$\mathbf{v}(A) = \frac{1}{2}$' is true, but $\mathbf{T}A$ is false. This observation shows that the implication $A \Rightarrow \mathbf{T}A$ cannot be considered as a theorem of metalogic, although the formula $\mathbf{T}A \Rightarrow A$ still holds in many-valued logic and its metatheory. We have here a simple analogy with alethic modal logic. The operator **T** behaves quite analogously to the operator $\Rightarrow$ expressing the concept of necessity. Any modal logic admits the formula $A \Rightarrow A$ and rejects the formula $A \Rightarrow A$ as a logical truth. If we accept the implication $\mathbf{T}A \Rightarrow A$ as tautological, but reject the reverse conditional $A \Rightarrow \mathbf{T}A$ as logically valid, the formula $\mathbf{T}A \Leftrightarrow A$ shares the fate of the latter and cannot be considered as a logical theorem.

Nevertheless, we have a way to justify the biconditional $\mathbf{T}A \Leftrightarrow A$. Suppose that we accept the equivalence

$$(13) \quad \mathbf{F}A \Leftrightarrow \neg\mathbf{T}A \Leftrightarrow \mathbf{T}\neg A,$$

which postulates that the falsity, non-truth of *A,* and the truth of not-*A* are equipollent, (12) becomes acceptable. Otherwise speaking, introducing bivalence legitimizes the full **T**-scheme as a good theorem of metalogic, provided that devices blocking semantic paradoxes are blocked. Thus, the principle of bivalence is a very important ingredient of the semantic theory of truth. It is quite unclear how **TM'** is related to bivalence and whether if a many-valued logic were analyzed by the conceptual machinery of truth-makers, the intermediate logical values would have their own makers or not; the same question concerns falsity-makers (see Armstrong 2004 for a discussion of falsity-makers). Consider the sentence (ii) "Tomorrow there will be a sea battle." Certainly, (ii) has no truth-maker at the present moment, but it will or will not have one tomorrow. Some authors (see Nef 2007) propose abstract truth-makers, but this way out seems to be very expensive (too expensive in my opinion) from the metaphysical point of view; the same concerns Josh Parsons's (see Parsons 2005) ideas connecting truth-makers for statements about past and future events with the realism/antirealism controversy. If we are not radical indeterminists, assertions about the future can have something like possibility-makers before they become realized or not. Even without introducing many-valued logic, the assertion "(ii) has a possibility-maker" is true, but the statement "(ii) has a truth-maker" is false. I guess that **TMT'** or any other non-maximalist truth-maker theory must be supplemented in order to be able to cope with statements about future. No metaphysically grounded theory of truth can ignore this issue, although purely semantic

(model-theoretic) constructions do not need discuss this question. I am inclined to think, unlike MSS and most authors dealing with truth-makers, that semantics should be seen as autonomous in principle with respect to ontology or metaphysics. As a corollary, we have that the semantic definition of truth as such does not require any metaphysical or ontological enrichment. Thus, Convention **T** suffices as the condition of material adequacy as far as the issue concerns the very general properties of truth. On the other hand, nothing prevents making syntheses, realist or not, of semantics and ontology. Truth-maker theories go in this direction.

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Chapter 6
From Grounding to Truth-Making: Some Thoughts

Fabrice Correia

Abstract The number of writings on truth-making which have been published since Kevin Mulligan, Peter Simons and Barry Smith's seminal, rich and deep article 'Truth-Makers' in 1984 is considerable. Some deal with the theory of the notion, some with its applications and some with both. This chapter adds up to the pile of writings which focus on the theory. I focus on one account of truth-making I find plausible, the view that for a truth-bearer to be made true by an entity is for it to be the case that the truth-bearer is true because the entity exists, where 'because' is understood as expressing a form of objective, metaphysical explanation which is now often subsumed under the label 'grounding'. Taking this account for granted, we may distinguish, amongst the general principles governing truth-making, those which derive from more basic principles governing the notions in terms of which it is defined, from those which do not. Which principles compose the first class, which are the more basic principles from which they derive and how do the former derive from the latter? I try to make some steps towards an answer to this difficult question.

Keywords Truth · Truth-making · Metaphysical explanation · Grounding

The number of writings on truth-making which have been published since Kevin Mulligan, Peter Simons and Barry Smith's seminal, rich and deep article 'Truth-Makers' in 1984 is considerable. Some deal with the theory of the notion, some with its applications and some with both. This chapter adds up to the pile of writings which focus on the theory.

A common *informal* explanation of what truth-making is runs as follows: To say that an entity makes a truth-bearer (sentence, proposition, etc.) true is to say that the truth-bearer is true *in virtue of* the fact that the entity exists. When it comes to official or formal explanations, though, voices diverge. The view I wish to focus on here is that 'in virtue of' talk should be taken seriously rather than as a mere *façon de parler*. More precisely, the view is that for a truth-bearer to be made true by an entity is for it to be the case that the truth-bearer is true *because* the entity exists, where 'because' is understood as expressing a form of objective, metaphysical

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explanation which is now often subsumed under the label 'grounding'.[1] Although I find this account plausible, I will not try to defend it here but simply assume that it is correct. (See Mulligan 2007 for an interesting discussion on whether the account should be accepted.)

Taking the account for granted, we may distinguish, amongst the general principles governing truth-making, those which derive from more basic principles governing the notions in terms of which it is defined—namely grounding, truth and existence—from those which do not. The question I am interested in here is the following: Which principles compose the first class, which are the more basic principles about grounding, truth and existence from which they derive and how do the former derive from the latter?

I am far from having a complete answer to this question, in great part because I am not clear on the question which principles characterise the interaction between grounding and the logical constants on one hand and grounding and truth on the other hand. In this short chapter, I nevertheless try to make some steps towards an answer.[2]

6.1 Logical Form

I will take the logical form of simple truth-making statements to be:

(a) *X* make it true that ϕ,

where '*X*' is a list of one or more singular terms and 'ϕ' a sentence, and that of simple grounding statements to be:

(b) ϕ because Δ,

where 'ϕ' is a sentence and 'Δ' a list of one or more sentences. I will henceforth abbreviate (a) to:

$$X \vDash \phi$$

[1] On grounding, see e.g. Fine (2001), Correia (2005, Chap. 3), Rosen (2010) and Fine (2012). One could also add Schnieder (2006a and 2006b), although the notion of explanation presented there is conceptual rather than metaphysical. An early friend of grounding, who did a lot to clarify the notion, is Bolzano (1973). The proposed account of truth-making appears in Correia (2005, § 3.2) and Schnieder (2006b).

[2] Given the size of the literature on truth-making and the scope of this chapter, I will largely omit to make reference to relevant papers on truth-making. The reader may consult Rodríguez-Pereyra (2006) and Rami (2009) for useful overviews and references.

and (b) to:

$$\Delta \lhd \phi.$$

These takes on the logical form of truth-making and grounding statements are by no means uncontroversial. I take it that several objects can jointly make something true without there being an object doing the work alone. Hence, the decision of allowing '*X*' in (a) to be a list of more than one singular term. Some would object that whenever several entities seemingly make something true, what does the truth-making is really the mereological fusion of these entities. Yet, such a view commits one to all sorts of weird fusions of heterogeneous objects, the existence of which I prefer to stay neutral on. Similarly, I take it that several truths can jointly ground a given truth. Some would object that in the relevant cases, it is the conjunction of the grounds that does the grounding. I disagree. I want to say, for instance, that (at least in some cases) a true conjunction is grounded in its conjuncts. But a true conjunction cannot be grounded in itself, since grounding is irreflexive.

There is a variant on (a), which is actually more standard, that can be formulated as follows:

(a') *X* make *p* true,

where '*p*' is a term for a truth-bearer (say a sentence or a proposition). There are also variants on (b) which involve talk about facts, for instance:

(b') The fact that ϕ is grounded in the fact that ϕ_1, the fact that ϕ_2, ...

A disadvantage of this mode of formulation is that it commits one to an ontology of facts, even presumably to a rich ontology of that kind, which is not to the taste of many. One might prefer a variant on (b') where talk about facts is replaced by talk of propositions or sentences. I will completely leave aside these alternative modes of formulation, although I believe that (a') and (b')—at least those variants which involve talk about sentences rather than propositions or facts—are meaningful.

A last remark concerns the possibility that something be made true by infinitely many objects, and the corresponding possibility that something be grounded in infinitely many truths.[3] If we stick to forms (a) and (b), we will be able take care of such cases only if we countenance infinite lists of singular terms and infinite lists of sentential expressions. This may be considered problematic. In order to avoid the problem in the case of truth-making, one may hold that the logical form of simple truth-making statements is (a) but with '*X*' as a plural term, where 'plural term' not only covers finite lists of one or more singular terms but also definite expressions like 'the natural numbers' and 'the space–time points'. But such a move is not available in the case of grounding, since what is on the right of 'because' in (b) is not

[3] Here as in several other places, for stylistic reasons I allow myself to talk about truth-making and grounding by using predicational forms like (a') and (b').

a list of terms for entities but a list of sentences. In this respect, the predicational mode of formulation illustrated by (b') is superior, since there the move is available. One may thus after all have to go for such a mode of formulation. I will leave this issue aside here and simply work with (a) and (b).

Let us turn now to the precise formulation of the account of truth-making in terms of grounding. Where 'X' is a list of one or more singular terms 'a_1, a_2, …', let '$E!X$' be the list of sentences 'a_1 exists, a_2 exists, …'. Let 'T' stand for the truth-operator 'it is true that'. The account runs as follows:

$$\text{Df.} \quad X \vDash \phi \text{ iff}_{df} E!X \lhd T\phi.$$

That is to say, in more informal (and literally inappropriate) terms: for a_1, a_2, … to make ϕ true is for the truth of ϕ to be grounded in the existence of a_1, a_2, … .

6.2 Structural Principles

Following common vocabulary used in proof theory, I divide the principles about truth-making to be discussed into the *structural principles* and the *logical principles*. A principle for truth-making is structural if it is not about the interaction between truth-making and the logical constants, and logical if it is about this interaction. I also divide the principles about grounding to be discussed into structural and logical, in the same manner. This characterisation of the distinction is not very precise, but the reader will certainly grasp what I have in mind by reading the examples I provide below.

The following structural principles for grounding are fairly plausible (where 'Δ' is a list of more than one sentence, '$\wedge\Delta$' is any conjunction of these sentences, and if 'Δ' is a 'list' of one sentence, '$\wedge\Delta$' is the sentence itself; '$\Box$' stands for 'it is metaphysically necessary that'; see Correia 2005, § 3.3, Correia 2010 and Fine 2012):

Structural principles for grounding:

g1.	If $\Delta \rhd \phi$, then $\wedge \Delta$ and ϕ	*Factivity*
g2.	If $\Delta \rhd \phi$, then $\Box(\wedge\Delta \rightarrow \Delta \rhd \phi)$	*Rigidity*
g3.	If $\Delta \rhd \phi$, then $\Box(\wedge\Delta \rightarrow \phi)$	*Necessitarianism*
g4.	If $\Delta, \psi \rhd \phi$ and $\Lambda \rhd \psi$, then $\Delta, \Lambda \rhd \phi$	*Cut (Transitivity)*
g5.	Not: $\Delta, \phi \lhd \phi$.	*Irreflexivity*

(In g4 and g5, 'Δ' may be empty).

Notice that granted that Factivity holds of necessity, Necessitarianism follows from Rigidity. The following structural principles for truth-making are also fairly plausible:

Structural principles for truth-making:

t1. If $X \vDash \phi$, then $\wedge E!X$ and $T\phi$ *Factivity*
t2. If $X \vDash \phi$, then $\Box(\wedge E!X \rightarrow X \vDash \phi)$ *Rigidity*
t3. If $X \vDash \phi$, then $\Box(\wedge E!X \rightarrow T\phi)$. *Necessitarianism*

It is easy to see that given Df, t1 follows from g1, t2 from g2 and t3 from g3.

Consider the following structural principle for truth-making often called 'Entailment Thesis':

$$\text{If } X \vDash \phi \text{ and } \phi \Rightarrow \psi, \text{then } X \vDash \psi, \quad \textit{Entailment Thesis}$$

where '$\Rightarrow$' stands for entailment. One may actually understand 'entailment' in different ways. On one view, entailment is strict implication, i.e.'$\phi \Rightarrow \psi$' is to be understood as 'necessarily, either ϕ or not: ψ', where 'necessarily' expresses metaphysical, conceptual or logical necessity. On this understanding of 'entailment' the Entailment Thesis is implausible, for a reason which has often been mentioned in the literature: Since every necessary truth is strictly implied by every truth, the Entailment Thesis, so understood, implies that every truth-maker makes every necessary truth true—which is an implausible view. But there is a more general objection to the thesis. In any reasonable sense of 'entailment', conjunctions entail their conjuncts. A consequence of the Entailment Thesis is thus that whenever some objects make a conjunction true, they make each of its conjuncts true. Yet, granted that, say, Socrates makes it true that he exists and Plato makes it true that he exists, it is plausible to hold that Socrates and Plato together make it true that Socrates exists and Plato exists. But one may deny that, say, Socrates and Plato together make it true that Socrates exists, on the grounds that Plato plays no role in making it true that Socrates exists.

Yet a similar principle, which does not face these difficulties, can be shown to follow from g4 given Df:

$$\text{t4.} \quad \text{If } X \vDash \phi \text{ and } T\phi \rhd T\psi, \text{ then } X \vDash \psi. \quad \textit{Grounding Thesis}$$

This principle escapes the previous difficulties since (i) it is arguably not the case that every necessary truth has its truth grounded in the truth of any truth whatsoever, and (ii) it is arguably not the case that the truth of a conjunction grounds the truth of its conjuncts.

Consider:

$$\text{t5.} \quad \text{If } X, y \vDash \phi \text{ and } E!Y \rhd E!y, \text{ then } X, Y \vDash \phi \quad \textit{Grounding Thesis}^{*}$$

(where 'X' may be empty). Taking Df for granted, it is easily shown that t5 follows from g4. This principle sounds just right.

6.3 Logical Principles I: Conceptualism

The previous discussion about structural principles was easy. When it turns to logical principles, things become more complicated, in part because there are several distinct conceptions of grounding which have some plausibility (see Correia 2010).[4]

Consider the following plausible logical principles for truth-making:

Logical principles for truth-making:

lt1.	If $X \vDash \phi$ and $Y \vDash \psi$, then $X, Y \vDash \phi \wedge \psi$	*Conjunction Introduction*
lt2.	If $X \vDash \phi$ or $X \vDash \psi$, then $X \vDash \phi \vee \psi$	*Disjunction Introduction*
lt3.	If $X \vDash F(a)$, then $X \vDash \exists x F(x)$.	*Existential Introduction*

Similar logical principles for grounding, which I dub *conceptualist*, are advocated by Kit Fine (forthcoming; see also Correia 2005, § 3.1):[5]

Conceptualist logical principles for grounding:

Lg1.	If ϕ and ψ, then $\phi, \psi \rhd \phi \wedge \psi$	*Conjunction Introduction*
Lg2.	If ϕ, then $\phi \rhd \phi \wedge \psi$ If ψ, then $\psi \rhd \phi \wedge \psi$	*Disjunction Introduction*
Lg3.	If $F(a)$, then $F(a) \rhd \exists x F(x)$.	*Existential Introduction*

Despite the similarity, the logical principles for truth-making cannot be derived from the conceptualist principles for grounding unless some principles connecting grounding and truth are added.

I suggest the adoption of the following principles I dub *strong semantic*:

Strong semantic principles for grounding:

Sg1.	If $T\phi$ and $T\psi$, then $T\phi \wedge T\psi \rhd T(\phi \wedge \psi)$	*Conjunction Introduction*
Sg2.	If $T\phi$ or $T\psi$, then $T\phi \vee T\psi \rhd T(\phi \wedge \psi)$	*Disjunction Introduction*
Sg3.	If $TF(a)$, then $\exists x TF(x) \rhd T\exists x F(x)$.	*Existential Introduction*

The standard truth-clause for conjunction states that a conjunction is true if and only if its conjuncts are both true. It is natural to view the right-to-left direction of this equivalence as holding in virtue of Sg1, the other direction being a mere case of entailment. Similar considerations hold of disjunction and Sg2 and existential quantification and Sg3.

[4] The distinction between these conceptions will be made explicit in this section and Sect. 5.

[5] I should say that Fine actually works with a weaker version of Existential Introduction, where '$F(a)$' is replaced by '$F(a)$ and a exists'. I shall ignore this nicety.

The following weak semantic principles also suggest themselves:
Weak semantic principles for grounding:

Sg1. If $T\phi$ and $T\psi$, then $T\phi, T\psi \rhd T(\phi \wedge \psi)$ *Conjunction Introduction*

Sg2. If $T\phi$, then $T\phi \rhd T(\phi \vee \psi)$ *Disjunction Introduction*
If $T\psi$, then $T\psi \lhd T(\phi \vee \psi)$

Sg3. If $TF(a)$, then $TF(a) \rhd T\exists xF(x)$. *Existential Introduction*

Yet the weak semantic principles follow from the strong ones given conceptualism: For $i \in \{1,2,3\}$, sg*i* follows from Sg*i,* Lg*i* and Cut.

Given Df, principles lt1–lt3 follow from the weak semantic principles: For $i \in \{1,2,3\}$, lt*i* follows from sg*i,* Factivity (for grounding) and Cut. These facts are summed up in Fig. 6.1.

6.4 Logical Principles II: Conceptualism and Necessitation

Consider the following further semantic principle:

Sg5. If $\Delta \rhd \phi$, then $T\Delta \rhd T\phi$. *Necessitation*

('$T\Delta$' is the list obtained from 'Δ' by prefixing each sentence with 'T'.) It has some plausibility and is particularly powerful given the conceptualist principles and the Tarskian principle:

If $T\phi$, then ϕ. *Tarski*$^{\rightarrow}$

In fact, it allows to directly derive the weak semantic principles: For $i \in \{1,2,3\}$, sg*i* follows from Lg*i*, Necessitation and Tarski$^{\rightarrow}$. The situation is summed up in Fig. 6.2.

Notice that Necessitation also allows one to derive, together with Cut, a strengthened version of the structural Grounding Principle t4, namely:

t6. If $X \vDash \phi$ and $\phi \rhd \psi$, then $X \vDash \psi$. *Strengthened Grounding Thesis*

6.5 Logical Principles III: Neutralism

Conceptualism involves a conception of grounding as very fine grained. In fact, given conceptualism, if ϕ holds, then it grounds both $\phi \wedge \phi$ and $\phi \vee \phi$. In Correia (2010), I argued against such fine-grained conceptions on the grounds that ϕ, $\phi \wedge \phi$ and $\phi \vee \phi$

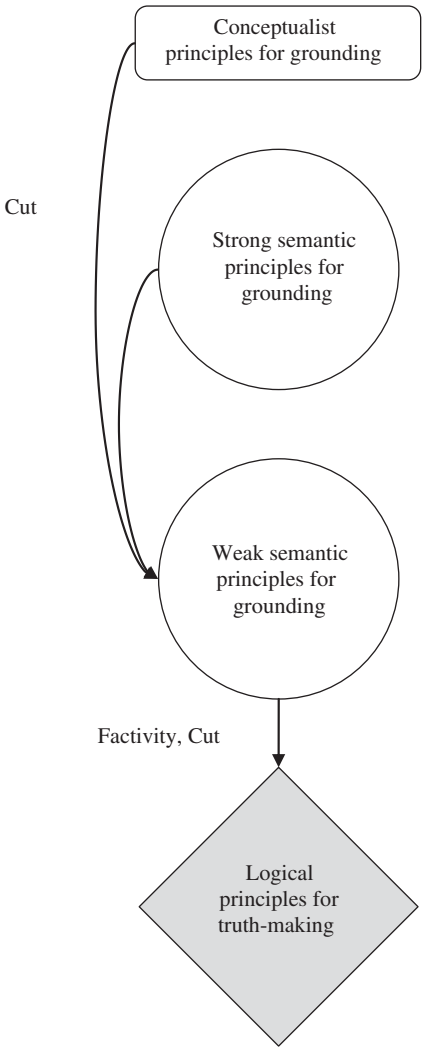

Fig. 6.1 From grounding to truth-making: Logical principles I

are all factually equivalent, in the sense that they all capture the same aspect of reality. The argument was to the effect that, granted that grounding is supposed to 'carve reality at the joints', ϕ can ground neither $\phi \wedge \phi$ nor $\phi \vee \phi$. I then put forward a 'worldly' conception of grounding and factual equivalence, which countenances only restricted versions of Lg1 and Lg2.

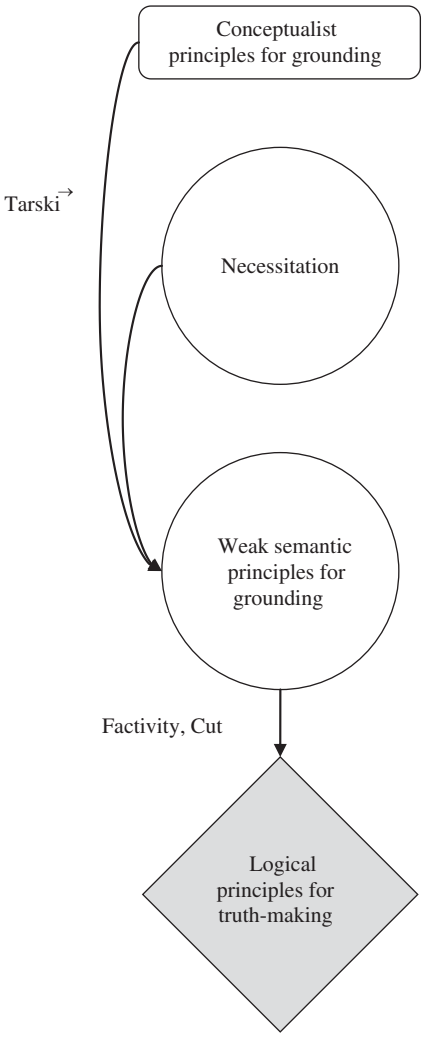

Fig. 6.2 From grounding to truth-making: Logical principles II

I now tend to think that there is room for both conceptualist and worldly notions of grounding, although I am not clear on how they are related.[6] Be it as it may, in this section, I examine the prospects of getting the same results as earlier but without assuming the conceptualist principles.

[6] I am tempted by the thought that there is a basic conceptualist notion in terms of which worldly notions can be defined by restriction.

The prospects are good. Consider the following logical principles for grounding I dub *neutral*:

Neutral logical principles for grounding:

lg1$^+$.	If $\Delta \rhd \phi$ and $\Lambda \rhd \psi$, then $\Delta, \Lambda \rhd \phi \wedge \psi$	*Conjunction Introduction*
lg1$^-$.	If $\Delta, \psi \wedge \varrho \rhd \phi$, then $\Delta, \psi, \varrho \rhd \phi$	*Conjunction Elimination*
lg2$^+$.	If $\Delta \rhd \phi$ or $\Delta \rhd \psi$, then $\Delta \rhd \phi \wedge \psi$	*Disjunction Introduction*
lg2$^-$.	If $\Delta, \psi \wedge \varrho \rhd \phi$ and ψ, then $\Delta, \psi \rhd \phi$	*Disjunction Elimination*
	If $\Delta, \psi \wedge \varrho \rhd \phi$ and ϱ, then $\Delta, \varrho \rhd \phi$	
lg3$^+$.	If $\Delta \rhd F(a)$, then $\Delta \rhd \exists x F(x)$	*Existential Introduction*
lg3$^-$.	If $\Delta, \exists x F(x) \rhd \phi$ and $F(a)$, then $\Delta, F(a) \rhd \phi$.	*Existential Elimination*

Plausibly, they are acceptable by both conceptualists and non-conceptualists—actually, they are derivable from the postulates put forward for worldly grounding in Correia (2010)—and they follow from the conceptualist principles: For $i \in \{1,2,3\}$, lgi^+ and lgi^- follow from Lgi, Factivity and Cut.

The weak semantic principles follow from the strong ones and the neutral principles: For $i \in \{1,2,3\}$, sg$i$ follows from Sgi and lgi^-. So given the neutral principles, we can get lt1–lt3 in the same way as before. Interestingly, only the *elimination* principles are at work there, but there is another route to lt1–lt3, via the *introduction* principles: For $i \in \{1,2,3\}$, lt$i$ follows from Sgi, lgi^+, Factivity and Cut. These facts are summed up in Fig. 6.3.

6.6 Aristotle

Aristotle (*Metaphysics*, 1051b 6–8, 1991) put forward a principle which can be read as comprising a further semantic principle about grounding:

> It is not because we think that you *are* white, that you are white, but because you are white we who say this have the truth.

The semantic principle states that truths ground their truth:[7]

Sg6. If ϕ, then $\phi \rhd T\phi$. *Aristotle*

The principle is plausible, and it allows one to derive principles which are themselves plausible. Given this principle, we can directly derive:

t7. If $E!x$, then $x \vDash E!x$,

[7] Schnieder (2006b) uses this principle in the context of truth-making theory in order to argue against the popular view that certain entities like tropes can play the role of truth-makers.

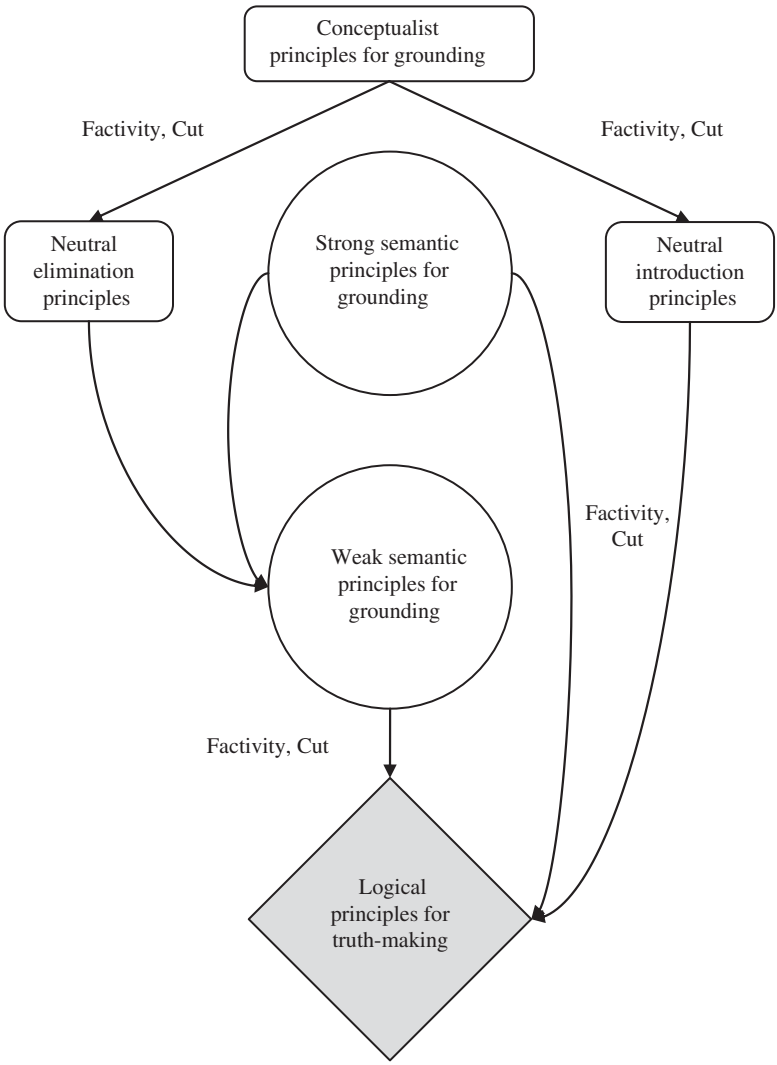

Fig. 6.3 From grounding to truth-making: Logical principles III

which many take to be true.[8] The converse of the Tarskian principle mentioned earlier, namely:

$$\text{If } \phi, \text{ then } T\phi, \quad \text{Tarski}^{\leftarrow}$$

[8] I gave the principle the label of a structural principle, but of course it may be argued that it is rather a logical principle.

is also derivable from Aristotle, thanks to Factivity. Finally, using Cut one can also derive:

t8. If $E!X \rhd \phi$, then $X \vDash \phi$.

Despite its plausibility, Aristotle generates inconsistency in the presence of other principles which are themselves plausible. Fine (2010) establishes that principles analogous to Aristotle, the conceptualist Existential Introduction Lg3 and certain other assumptions, in particular about sentences, propositions or facts, are together inconsistent with the view that grounding is irreflexive and transitive.[9] Instead of presenting the Finean arguments, let me illustrate the problem starting from Aristotle itself rather than the Finean analogues.

Lg3 concerns quantification into nominal position. But consider the corresponding principle about quantification into sentential position, more precisely the following special case:

(i) If $T\phi$, then $T\phi \rhd \exists\xi T\xi$.

The principle says, roughly, that if something is a truth, then its being true grounds the fact that there is least one truth. Now let 'σ' be short for '$\exists\xi T\xi$'. Thus one instance of (i) will be:

(ii) If $T\sigma$, then $T\sigma \rhd \sigma$.

Given that it is true that σ, we can infer:

(iii) $T\sigma \rhd \sigma$.

But since σ, by Aristotle we have:

(iv) $\sigma \rhd T\sigma$.

(iii) and (iv) are inconsistent with Cut and Irreflexivity.

The neutral principle corresponding to (i), namely:

(I) If $\Delta \rhd T\phi$, then $\Delta \rhd \exists\xi T\xi$,

also generates inconsistency. In fact, an instance of (I) is:

(II) If $\sigma \rhd T\sigma$, then $\sigma \rhd \sigma$.

[9] As in Fine (2012), in the 2010 paper, Fine actually works with a weaker version of Existential Introduction, where '$F(a)$' is replaced by '$F(a)$ and a exists'. I should also say that he formulates the arguments using a notion of partial grounding instead of grounding *simpliciter*. Let me finally mention that Fine also presents arguments involving universal rather than existential quantification, which I find less convincing.

Again, given that σ, by Aristotle we can infer (iv) above, which by (II) leads to:

(III) $\sigma \triangleright \sigma$.

(III) violates Irreflexivity.

Something needs to be done. Some might react by rejecting (i) and (I) on the general grounds that quantification into sentential position is meaningless. I do not find this reaction plausible. But even if it is accepted, the Finean arguments—which involve only standard quantification into nominal position—remain. It is beyond the scope of this chapter to discuss in details the options which are available, be it in response to the arguments above or in response to the Finean arguments, and I refer the reader to the excellent discussion in Fine (2010).

6.7 What Then?

I have so far discussed a number of principles about truth-making and grounding and their connections, and I have left a number of issues about these principles open or unresolved. This study has also been largely incomplete insofar as there are a number of important questions about truth-making which I have not addressed.

For instance, I have discussed only three logical principles for truth-making, namely the following introduction principles:

It1.	If $X \vDash \phi$ and $Y \vDash \psi$, then $X, Y \vDash \phi \wedge \psi$	*Conjunction Introduction*
It2.	If $X \vDash \phi$ or $X \vDash \psi$, then $X \vDash \phi \vee \psi$	*Disjunction Introduction*
It3.	If $X \vDash F(a)$, then $X \vDash \exists x F(x)$.	*Existential Introduction*

But there are other principles of the same vein which have some plausibility, for instance:

If $X \vDash \neg\phi$ or $X \vDash \neg\psi$, then $X \vDash \neg(\phi \wedge \psi)$	*Neg. Conj. Introduction*
If $X \vDash \neg\phi$ and $Y \vDash \neg\psi$, then $X, Y \vDash \neg(\phi \vee \psi)$	*Neg. Disj. Introduction*
If $X \vDash \phi$, then $X \vDash \neg\neg\phi$.	*Double Neg. Introduction*

I have also left aside principles concerning universal quantification, and certain elimination principles, for instance the following two principles:

If $X \vDash \phi \wedge \psi$, then $X \vDash \phi$ and $X \vDash \psi$	*Conjunction Thesis*
If $X \vDash \phi \vee \psi$, then $X \vDash \phi$ or $X \vDash \psi$,	*Disjunction Thesis*

which are discussed in the literature.

The work that remains to be done is thus very substantial. But I believe that the foregoing provides an outline of how it can be carried out.

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Chapter 7
Fundamental Ontology and Ontology of Epistemic Processes

Pierre Livet

Abstract If "made true" is not a "real" relation, what kind of relation is it? Maybe the explicitation of truth is an explicitation of the articulation between a structural relation (which builds a structure) and an explicitation relation, which does not add any new ontological structure, but is a characterization relation. Even the very epistemic process of explicitation has its ontological counterpart, its stationarity with respect to the type of the explicited process. "Making truth" needs the coherence between the structure of the state of affairs, and the structure of the epistemic process. The "tie of essence" suggested by Mulligan indicates that this coherence constraint is satisfied.

Keywords Ontology and epistemic process · Structural relation · Explicitation relation · "Making true"

7.1 Introduction

Mulligan claims in "Two Dogmas of Truthmaking" that in the sentence: "the proposition that Sam exemplifies sadness is made true by the obtaining state of affairs that Sam exemplifies sadness", exemplification is a real relation but "made true" expresses no relation, only a tie of essence. Mulligan distinguishes "is true *because*" and "is made true by", as in the sentence: "the proposition that *p* is true because the state of affaires that *p* obtains"; the second formula can be paraphrased by "is true *because of* ", as in the sentence, "the proposition that Sam exists is true because of Sam". Mulligan claims that in the two cases, "because" is not a relation, but a connector, relating two sentences in the first case, one sentence and a noun in the second case. A relation has a semantic value, but a connector has not, therefore "making true" is not a relation.

In the ontological square, with universal substances at its left corners, particular substances and at its right corners, universal accidents (or moments, or properties) and particular accidents, exemplification is a diagonal relation: A universal accident (sadness) is exemplified in a particular substance (Sam). It relates ontological

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entities that belong to different categories, but that are both ontological basic types. By contrast, "made true" relates here a proposition (the ontology of which is complex) and its truthmaker, not just a state of affairs, but the obtaining of that state of affairs. Mulligan is here in conflict with Armstrong, who thinks that there is a real relation between a complex entity, a particular "state of affairs", and the truth of the proposition that Sam exemplifies sadness. In the perspective of Armstrong, the truth of this proposition depends on the state of affairs. For Mulligan, the tie of essence works in the other way, and here the determination of the state of affairs depends on the exemplification expressed by the proposition.

Let us take for granted that: "exemplification is a real ontological relation". What about the status of "making true"? In comparison to connectors in the usual sense—a connection between two formulas that is governed by rules of combining truth values—the "connector" "because" in the first case is more complex: It does not only return a truth value but also anchors the truth of the proposition that *p* is true in the ontological fact that the state of affairs of *p* obtains. If we admit that "propositions" can be considered as ontological correspondents for epistemic combinations between different categories of entities—properties and substance, for example, or tropes and compresence—such a connector relates the epistemic-ontological stance and the purely ontological one. The "connector" in the second case ("because of Sam") shares this complexity, in a still more tricky way: It relates a proposition that has an even stronger ontological impact (the existence of Sam) to the ontological entity itself—via the proper name of this entity. We can then suspect that the specificity of these connectors, the impossibility of "made true" to be a "real" relation, and its necessity to be a different kind of link could be related to the relations between an epistemic stance and an ontological one.

The truthmaker doctrine is related to the relation between propositions and more basic ontological entities. Its slogan could have been: Do not bother with the infinity of propositions. Sam and his sadness make true a lot of propositions, including "Sam is sad" and "Sam exemplifies sadness". But we have to pay attention to Sam and his sadness, not to these propositions. We have to go down to the fundamental entities that make these propositions true.

As Mulligan mentioned in the same paper, this move towards the basic entities avoids a lot of problems and allows philosophers to be real realists, so to speak. But it has its own troubles. Truthmaker maximalism has problems with negative and disjunctive facts. Defining the truthmakers of negative facts would imply to determine the set of all the facts that there are, and to try to take the complement, but this requires a close world assumption, and facts like the undecidability of some propositions are problems for this assumption. Disjunctive facts would require at the same time to determine which of the disjuncts are the case and to deny that this determination is the case.

Remember that antirealists do not have these two problems. For them, negation is an epistemic operation with no realist claim, and so can be the classical disjunction—leading some philosophers to prefer "honest disjunction", asserted only when we have the capacity to be sure that one disjunct is true.

If you are an antirealist, "making true" a proposition does not anchor it in reality but strengthens its epistemic accessibility. If you stick to the realism of the truthmaker doctrine, "making true" anchors the proposition in reality. This anchoring itself cannot be a real relation because in this case this relation would have to be expressed by propositions, and we would go back up in the heaven of propositions without reaching the ground of truthmakers. We would be attracted by the epistemically infinite potential of propositions and the ontological parsimony of truthmakers would no longer be obtained.

This little story makes us suspect that the attachment of the truthmaker doctrine to a stronger and more intimate tie than the one of a relation, as well as its difficulties with negative facts and disjunctive facts, could be a kind of negative track of the absence of the epistemic side, of the will to dispense with it. Maybe the "tie of essence" related to the alethic problem has to be so specific because truth implies the combination of the epistemic and of the ontological sides in a sort of unity.

In what follows, we suggest that instead of putting aside this epistemic side as linked with the antirealist stance, we would rather pay attention to the ontological side *of* the epistemic side, to the ontological bases of the epistemic processes as such. In this perspective, the difference between real ontological relations and "ties" (particularly when associated with truth) could be a trace, in the ontological way of speaking, of an epistemic way of speaking that the truthmaker trend has tried to put aside.

7.2 The Ontological Basis of the Epistemic Side

As it is now obvious, we do not want to come back to a pure epistemic and antirealist or constructionist stance: We believe that sound epistemic operations are anchored on ontological bases. Such ontological bases have to be found for the classical epistemic operations—identifying, classifying, and making inferences—and we could consider inferences as transformations between different ways of classifying. The ontological processes that are at the basis of these operations ensure the access to the entities, their distinction from other entities as well as the possibility of putting them together with other entities, and the validity of the transformations from one distinction or collection to another one. The constraints that these processes have to satisfy in order to be operational are at the same time ontological and epistemic constraints.

The truthmaker trend puts the focus on the truth and the anchorage of true propositions on fundamental entities, instead of focussing on the constraints on operations and the processes (or relations) that are the ontological basis of the determination of propositions. But in order for propositions to be true, their constitution and consequently the constraints on the processes that carve them up have to be co-natural, so to speak, to the operations of identification, classification, and inference. If we are allowed to call Mulligan's version of the truthmaker story a "proposition-entity" version, we could point at this other side of the truthmaker

story as an "operation-process" version. Without convenient constraints on these processes, the combinations of propositions cannot be assumed to keep the truth from one proposition to another one. The very basic compresence of two qualities could not be tracked without satisfying these constraints. As we cannot assume that all propositions are well constituted in this respect, we have to find what constraints ensure that this constitution is sound.

If developing this version were shown to be possible, then the problem of the negative and the disjunctive facts could vanish. Negation and disjunction can be defined in terms of constraints on the processes of classifying and making inferences. Classical disjunction "A or B" implies that the only classification that is operational does not determine which of A and B is the case. Negation is related to the constraint that passing from the left side of the turnstile to its right has to be marked by negation (and similarly when passing from the right side to the left one). This implies that we cannot benefit from the conjunction of classifications to be transformed and processes of transforming classifications and benefit at the same time and at the same level from these very same processes and the result of these transformations. Conversely, when we pass from the right to the left side, we use again the processes of transformation, but are not sure to get again the transformed classes, or find again these classes, but by other processes of transformation. These constraints seem not only to be epistemic ones but also constraints on ontological processes (think of physical transformations and mixtures).

The "process-operation" version seems to be open to an objection. On each epistemic operation, another epistemic operation can be applied. Not only do we have to find ontological bases for operations of identification, distinction, and classification, and inferences but also other ontological bases for examining the validity of these identification, classification, and inferences, and so on and so forth.

There are two answers to this objection. First, the ontological bases of epistemic activity are not the particular processes but the constraints on these processes, and these constraints are the same at each level. Second, at the beginning—the identification of entities—basic entities can be assumed to be singularized by themselves: A particular (substance or quality) is singularized by its own being. When we start from substrates and particular properties, for example, we presuppose also the capacity of entities of one type to distinguish from entities of another types. In a tropist ontology, particular qualities are presupposed to have the capacity to distinguish from the relation of compresence. We will see that these two last moves are disputable.

At a further step, for example, classification, we have to add new processes (putting together and separating basic entities), but their ontological constraints, which determine their ontological types, remain the same all the way up. The differences between the classes depend not on new types of processes, but only on their combination with different processes of the same type.

If we assume that a fact can be determined just by identification and classification—corresponding in a sentence to a simple predication—at this level, we need neither negative facts nor disjunctive ones. Negation has only all its potential when it is related to inferences—transformations from one classification to another one—

and when there can be conflicts between two transformations. Negation is then the starting point of the revision of classifications. In the same way, disjunction is related not to conflict, but to difference of granularities of classifications: At one level of the process of classification, two classes cannot be differentiated, and this is not only a property of our cognitive limitations, but can be a property of the real processes of putting things together.

7.3 Use and Explicitation

We can suppose that processes and their constraints are the ontological bases of epistemic operations. But the alliance between ontology and epistemology implies the possibility of the presence of the ontological basis without the activation of the upper levels of epistemic processes. For example, a process of classification or gathering could be present and its gathering with other processes of classification (a collection of second order) could be absent, not to speak of the possible inferential transformations of some classifications into other ones. More generally, when a process is active or in use, it does not classify itself or transform itself, it does not make itself explicit. Other processes are needed for that operation that could be called "explicitation". Mulligan's example just shows this point: Saying that Sam "exemplifies" sadness is making explicit the relation of exemplification, while the state of affairs of Sam's sadness does not make explicit this relation, but only gives the ontological basic entities that could be made explicit as bases for the relation of exemplification. While Armstrong claims that the basic entities are sufficient, Mulligan claims that the "explicitation" process is the condition of the state of affairs that Sam exemplifies sadness (a state of affairs which stays at an upper level than the one of the state of affairs of Sam's sadness, even if it is based on it).

We could generalize. Any ontology needs two regimes: a regime of "being in use"—entities are "at work"—in which the capacities needed for the entities to operate are simply presupposed and not made explicit, a regime in which we begin to make explicit the ontology of these capacities. This difference is in a way analogue to the difference between propositions and the set of their proofs. Martin-Löf gives the second as semantics for the first, and this is sound and illuminating but would require a perfect and complete explicitation—an ideal situation. Making explicit the implicit presuppositions is in fact only possible step by step, from the fundamental entities towards the different levels of epistemic operations. In this way, even if making every operation completely explicit is an infinite task, one level does not have to wait for an infinite hierarchy of explicitations in order to begin to work.

But in order to be reasonably confident that no bad surprise will occur in this progress, a further condition has to be satisfied. It is required that making explicit the ontology of epistemic operations at higher levels should not change the type of the basic ontological entities, and so on at every level of explicitation. To use an analogy, the projection of the successive operations of explicitation on the level of basic entities should have a null value measure. This seems possible if such

ontological operations are *processes,* not in the usual sense of processes: four dimensional entities, extended in space and time, but *processes* in the sense of entities whose ways of being are their ways of doing. Whatever new ways of doing the processes at upper level will present, they still will be of the same general type of *processes*.

Another way of putting things is to require what could be called stationarity in the progress of explicitation. The process of making explicit the previous ways of processing does not change the type of the present process relatively to the previous one, except of course that we have built upon it a new level of explicitation so that the previous process is now made explicit. We can be ensured that this stationarity will also be satisfied in further steps if the process of explicitation is of a kind that can be reapplied, not really on itself, but on its previous steps of use, as in a recursive process. In this way, the stationarity—the stability up to the differences of steps in the recursive process—is warranted.

7.4 Biases of the Top-Down Perspective

Stationarity is not always the case. For example, paradoxes such as Russell's paradox of the class of classes that do not belong to themselves cannot satisfy stationarity. Most of the paradoxes are built in a "bottom-up" and "top-down" way, adding new higher levels on the top of the level of basic classes, in conjunction with negation. Such paradoxes arise from nonstationary attempts of explicitation.

Some apparently non-paradoxical ontological notions seem to be created in this way, by following the top-down way, when we create them from higher levels of explicitation and then add these new entities to the ones at more basic levels. We had an explicitation problem and solve it by imagining a new entity; then, we go backward and assume that this entity works at the level of the more basic ones. We forget that the explicitation, in order to be hoped stationary, has to be built on the top of the basic entities, as it makes explicit their articulations and is not supposed to create these articulations.

For example, the relation of compresence in tropes is introduced in order to give an account in the pure tropist world of what appears in our usual world as objects, linking several tropes together. It could be a kind of retrospective illusion, a retroprojection, onto the basic entities, of the epistemic operations introduced in order to identify more complex objects. The articulations constitutive of these complex objects have to be made explicit, and then we retrospectively imagine a type of articulation compatible with pure tropes (particular qualities or properties) and project it back onto the basic tropes. In a sense, compresence is introduced as a reminiscence of the problem of the attachment of qualities to substances, since a substance plus a quality can be considered as a proto-object. The problem is that if a substance can be assumed to distinguish itself by itself from another one, as well as a property or quality from another quality or property, we are not sure that a substance can distinguish itself by itself from its quality. The articulation of a substance and its quality

could be so tight that the two entities could not distinguish themselves from one another. The distinction here is one of those that have to be made explicit, by differentiating the type of substances and the type of qualities. But if the differentiation is necessary for explicitation, this does not imply that the difference that has been made explicit is itself an entity to be added to the fundamental ones.

If this sounds right, "compresence" could be a trace of a collapse of the distinction between the two ontological regimes, the one of the functioning of basic entities and the one of making their functioning explicit. This distinction works in a bottom-up way. If we try to make it work in a top-down way, we would be tempted to transform categories that are the result of making explicit the articulations of fundamental entities into entities that are supposed to be at the same time the cement and the distinctive boundaries between entities of different types. But these entities are no more than the traces of explicitation operations.

If we generalize this way of thinking, and want to acknowledge that there could be entities that add something to basic ones, instead of being only explicitations of the basic ones, we could introduce a distinction among relations, contrasting relations with "null projection", related to the operations of making explicit presupposed ontological processes, and relations that add structure to entities. We would call the first type of relations, characterizing relations, and the second ones, structural relations. Instantiation is a characterizing relation.

Usual connections—except Bergman's connection, a non-relational tie, which is a characterizing relation—are structural ones. Of course, in a sense, making explicit the articulation between fundamental entities adds structures (the structures of the processes of explicitation), but in principle these structures have a null projection at the basic level. Exemplification, by contrast, can be said to introduce a new structure: The diagonal relation between universal property and particular substrate, or universal substance and particular accident, is not taken here as a relation between the basic entities as such, a relation that makes explicit the articulation between two basic entities (it would then still be an explicitation relation). It works as a relation between two different types of entities, a relation at the level of types. This is a correct move as long as we do not imagine that such a relation exists at the level of basic entities: A particular substance and its property do not bother to distinguish themselves as types of entities, they just are linked together. This could be an argument against an ontology requiring the four corners of the ontological square. If universal properties—or universal substances—can be taken as playing at the same time the role of basic entities and the role of types—universalization could be a kind of typification—then they constrain us to present incorrectly these processes that only make explicit types of entities as processes adding some structure—the structure added at the level of types.

In this sense, Mulligan's "tie because of essence" seems to be a pure explicitation relation. Note that Mulligan calls it a tie and not a relation precisely in order to avoid that its introduction adds something to the ontological picture, something similar to an articulation between different basic entities—as propositions are surely not basic entities.

Is "making true" a characterizing or a structural relation? The problem has to be made distinct from the one of "facthood": How is a fact made, and to what extent is a complex ontological entity like a state of affairs required? If we needed an additional structure for passing from fundamental entities to states of affairs, we would have confused processes that make types explicit with processes that add structure. Surely, most of the facts need a rich structure. But when we pass from the "fact" to the "state of affairs", we pass from the structured complex to the explicitation of the articulation of its components, taken only globally as allowing us to take the state of affairs as the ontological correspondent of a proposition in order to give a sense to the truth or falsity of this proposition. We pass from the constitution of the fact and its structure to the simple explicitation of the possibility for a fact to be isolated and considered as a global entity of a higher level. The articulation is not taken as an additional structure, but just as the explicitation of the "symplokê" (the global articulation) required for truth to be relevant.

Explicitation of "symplokê" ensures that a state of affairs is a relevant ontological complex for the question of the truth of a proposition to be asked. But for questions of truth, we are not satisfied with simple relevance. We need "real" truth. This difference presupposes structural links between some cognitive processes and the state of affairs. But we can also limit ourselves to making explicit what is needed for truth. This explicitation is a peculiar one: It is an explicitation of the articulation between structuration and explicitation, as truth on one hand needs a structuration, but on the other hand only makes explicit that the explicitation is coherent with the structuration.

Our hypothesis is that this explicitation of truth requires to make explicit (1) the basic ontological entities, (2) the epistemic operations or processes and their ontological types, and in the end (3) a kind of coherence between the structure of the bundle of entities or state of affairs (if there is such a structure) and the structure of the epistemic processes. The "tie because of essence" suggested by Mulligan seems to indicate that this coherence constraint is satisfied.

Theories of truth may focus on one of the structural requisites of truth or on its explicitational or characterizing aspect. If we emphasize the characterization aspect of the notion of "making true" and believe (wrongly) that explicitation relations have to be cancelled out in order to access "real" truth, we are led to a disquotational theory of truth. If you are a correspondentist, you focus on the structural aspect of the problem. Truth seems to imply a "tie" or an implicit articulation between a structural constitution and the constitution of an explicitation. Making this articulation explicit is a dangerous manoeuvre as long as we do not understand the role of explicitation and its constraint of having a "null projection", its requirement of not adding ontological structure to the fundamental entities.

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Chapter 8
Tropes and Truth

Keith Lehrer and Joseph Tolliver

Abstract The advantages of trope theory for metaphysics and ontology have been brilliantly articulated by Kevin Mulligan. Rejecting the existence of properties, following a tradition of Hume and Reid, leads to parsimony. We wish to add a caveat. Using tropes referentially to refer to a plurality of individuals by exhibiting what they are like has an epistemological advantage for securing truth. When the individual trope is used as an exemplar or sample to represent a plurality of objects directly, then, it refers to itself as an exhibit of the individuals in the plurality. The exemplar used in this way, in exemplar representation, represents and is true of itself as one of the individuals it represents in a reflexive loop. The direct reflexive representation is a secure truth loop. We argue that the security of the truth connection is lost if properties or even predicates are brought into the connection. Tropes used in exemplar representation can provide the secure truth connection only if properties do not function in a mode of presentation of the facts that sensory particulars represent. Goodman is a source of the notion of exemplar representation, which he called exemplification, but he brought in properties as what was exemplified, and lost, thereby, the security of the self-representational truth loop of the exemplar reflexively back onto itself. Using the exemplar itself as directly referential as a mode of presentation of facts about itself without connecting it with properties or predicates, what Lehrer has called exemplarization, is required to secure a truth connection between representation and experience.

Keywords Tropes · Truth · Exemplarization · Self-knowledge · Properties

Trope theory has been focused on the metaphysics of a theory of tropes that eliminates the need for appeal to universals or properties. This has naturally raised the question whether tropes can supply us with truthmakers for our linguistic description of the world. We should like to propose a modest contribution to the discussion of the relationship between tropes and truth. Our argument is that a trope as one kind

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of truthmaker can offer us a guarantee of truth when it is reflexively the vehicle of representation and, at the same time, one of the objects represented. Moreover, the security of the truth guarantee requires that the form of representation not depend upon the exemplification of universals or properties. We propose that the notion of exemplification of a property by an individual, even if the individual refers to the property as well as exemplifying it, as Goodman (1968) proposed, be replaced with another notion suggested by Lehrer (1997), of exemplarization, which is a notion of an individual serving as an exemplar used to represent a plurality of individuals including itself without reference to a property. Exemplarization of tropes provides reflexive truth security only if, as Tolliver noted (2012), the use of the trope as an exemplar does not depend on reference to a property. The truth security can provide a form of certainty. Since Mulligan (2003) has concerned himself with primitive certainty, we hope that he will find something of value in our proposal concerning the relationship between tropes and truth.

We begin with a notion of exemplification proposed by Goodman that depends on reference to properties to contrast with the position we wish to defend and to illustrate a first attempt to use an individual, which may be a trope, as a symbol. Goodman (1968) writes in a famous passage:

> Consider a tailor's booklet of small swatches of cloth. These function as symbols exemplifying certain properties. …Exemplification is possession plus reference. …The swatch exemplifies only those properties that it both has and refers to. [p. 53]

Goodman then follows his remarks on properties with a shift to talk about predicates. He says,

> So far I have spoken indifferently of properties or predicates as exemplified. This equivocation must now be resolved. Although we usually speak of what is exemplified as redness, or the property of being red, rather than as the predicate "(is) red", this leads to familiar problems attendant upon any talk of properties. [p. 54]

And he concludes,

Let us then, take exemplification of *predicates* and other labels as elementary. [pp. 54-55]

But later he adds a qualification in answer to a question he poses:

> Are only words exemplified? Are there no samples of anything unnamed? The general answer is that not all labels are predicates; predicates are labels from linguistic systems. Symbols from other systems—gestural, pictorial, diagrammatic, etc.—may be exemplified and otherwise function much as predicates of a language. …Exemplification of an unnamed property usually amounts to exemplification of a non-verbal symbol for which we have no corresponding word or description. [p. 57]
>
> The constraint upon exemplification as compared with denotation derives from the status of exemplification as a subrelation of the converse of denotation, from the fact that denotation implies reference between two elements in one direction, while exemplification between the two in both directions. [p. 59]

This is as far as we will follow Goodman, for it reveals both an insight and a problematic assumption. The insight in our language is that some trope, some individual, can become a nonverbal symbol and as such can be exemplified. The problematic

assumption is that the trope can become a nonverbal symbol only by reference to a property or a second label in a system *other than itself.* The basic idea that Goodman introduces in his notion of exemplification is that of a sample referring to a second element, a predicate or label that it exemplifies, that in turn refers to it as a denotatum. So exemplification requires two elements with reference running in two directions, for example, from a swatch to a label to which it refers and from the label back to the swatch it denotes.

We begin by noting two things, one verbal, namely, that the traditional use of *exemplify* in philosophical discourse is one in which an individual exemplifies a property which is denoted by a predicate, or nominalistically reformulated, an individual exemplifies a predicate that denotes it. So in the nominalistic use of the term "exemplify," exemplification just is the converse of denotation. It would be clarifying to introduce another term to capture the notion of a trope being used as a symbol, like the swatch, which denotes things and is, at the same time, used to denote itself because it functions as a sample, an exemplar to pick out the things denoted. Lehrer introduced the term "exemplarization" for this purpose, since the symbol functions as an exemplar to select the things denoted and we follow his usage.

We note another more important difference with Goodman. He assumed that an individual, a trope used as an exemplar, for example, must be embedded in system of labels. That raises the question of whether the system must be a system of social conventions. Our conjecture is that for Goodman the answer was affirmative because his opposition to nativism precluded the idea that the exemplarization of a trope could be the result of an innate capacity to make a symbol out of an individual. We can leave this open for the purposes of our discussion here. However, Lehrer (1997) has argued for the conclusion that a conscious experience, a sensation, for example, may be exemplarized. Our purpose here, however, is to argue for a connection between truth and tropes that can function as symbols without assuming what sort of thing can play the role of an exemplarized trope.

Here is our argument concerning the connection between truth and tropes. Simply put, it is this. If a trope is exemplarized, that is, used as a symbol to pick out a plurality of objects in the way in which a sample does, by showing us what the objects are like, then the trope will be true of itself. Notice that if the swatch of red cloth is used as a symbol to represent a plurality of objects by showing us what they are like, then it refers to those objects in the sense that it denotes them. Just as the word "red" that denotes red objects is true of them, so the swatch used as a symbol that denotes them is true of them. So there is a familiar connection between denotation and truth that gives us a connection between the exemplarized trope and truth. However, that connection, when it is a connection between two elements, the swatch and another bit of red cloth, for example, does not guarantee that the application of the symbol by one who applies it will be correct. Labels can be misapplied. That is a feature of our use of symbols, and the exemplarized trope is no exception.

However, consider the case in which the trope is exemplarized to select a plurality of objects that it denotes by serving as a sample or exemplar of the selected plurality. It must, assuming the nature of exemplarization, in order to denote the

plurality, denote itself. For it is used to select the plurality by being used as an exemplar, sample, or model to select the objects. So the objects selected are selected by a process that functions on analogy to the use of an indexical such as, "thing like this." Since everything is like itself, the plurality of denoted objects the trope selects are the ones that are like this, like the trope. As a result, the exemplarized trope denotes itself, as well as other things it selects, and, therefore, is true of itself. The process of exemplarizing a trope has the security of a reflexive loop of self-representation. Unlike what Goodman suggested above, there need not be two elements involved in the reference relation. The exemplarized trope refers to itself, and, in that reflexive way loops on to itself as true of itself. The removal of the second element carries with it the removal of the possible misapplication of the symbol to something else. There is only the trope that refers to itself, represents itself, and is true of itself. The extension of the trope to other objects cannot be expected to preserve the security from misapplication, of course. But the application of the trope to itself in exemplarization is as secure as the process of exemplarization that makes it a symbol representing objects of which it is true. If the exemplarized trope is a symbol for anything, it is a symbol for itself.

The above account raises questions. One question is whether the selection of objects that are like the trope is to be construed as the selection of objects that have the same property or properties as the trope. When we consider the process of exemplarizing a trope so that it stands for or denotes a plurality of objects, have we avoided dependence on reference to properties (or, as Goodman ultimately preferred, some predicate or label in a system of symbols) that the objects exemplify? The answer must be that the reference of the exemplarized trope does not depend on reference to any such property or predicate, because the exemplarized trope refers to itself reflexively. The reference is direct; unmediated by any mode presentation involving properties of its referents, or reference of any predicate or label true of its referents. This leads to the second question, to wit, if the trope does not refer to the plurality of objects by means of referring to a property or predicate that they exemplify, how does it refer to those objects? The answer to the second question raises difficult and fundamental questions about reference. Many would think that reference is a matter of social convention or some communal disposition to apply the referential term. That answer would preclude the security from misapplication in the same way that making reference a matter of referring to a property or predicate would. Bringing in some entity, a property, a predicate, a social convention, and the risk of misapplication of the property, the predicate, or the social convention to the exemplarized trope immediately arises. In short, if the reference of the trope is mediated by some other items such as a property, predicate, or social convention, the exemplarized self-representation of the trope is no longer direct and reflexive and allows, therefore, for the misapplication of exemplarized trope to itself.

Reliable self-reference to the exemplarized trope must be direct unmediated reference. We mean by an indirect account of exemplar reference one on which, necessarily, if an exemplar *e* refers to some group of things *G*, then there exists a property *F* (or predicate *K*), such that, *e* is a bearer of *F* (or denoted by *K*) and reference to the members of *G* is secured by a mode of presentation of *F* (or by complete grasp of

the meaning of *K*). When reference is indirect in this way, self-reference will be indirect. Indirect reference can go awry, and therefore also self-reference, due perhaps to incomplete grasp of the mode of presentation of *F* (or incomplete understanding of the meaning of *K*).

Consider a novice sampling some wines at a tasting. He sips wine A. It tastes sour, but neither at all sweet nor bitter. Wine B is also sour, but also slightly sweet. Wine C tastes sweet and slightly bitter, but not at all sour. After sampling several wines, the novice undertakes to organize his impressions of the wines and sorts them into A-ish, B-ish, and C-ish categories on the basis of their being like wine A, wine B, or wine C in taste. On an indirect account of the content of the novice's categories, A-ishness imposes a condition of being somewhat sour, but not very sweet or bitter on all A-ish tasting wines. Similar application conditions for B-ish and C-ish wines derive from the taste profiles of experiences of wines B and C. Wine B is like wines A and C, which are not at all like each other. Wine B is somewhat A-ish. Wine C is somewhat B-ish. Wine C is not at all A-ish, but the novice might classify a sample of C as A-ish. While the novice notes the similarity of wine C to B, he might fail to note C's lack of A's sourness, or fail to note C's substantial element of bitterness that A lacks. So, our novice might mistakenly classify samples of other wines as A-ish that are not at all A-ish. By the same token, there is nothing to prevent a mistaken classification of an experience of a sample of wine A as A-ish. Our novice's notion of an A-ish tasting wine might have incorporated a mode of presentation derived from the flavor profile of wine C. By his own lights, the taste of a sample of wine A would then not be A-ish! Any application of this category to an experience of tasting a sample of wine A would be a misapplication. Indirect reference thus cuts the truth connection between an exemplar and its application to itself.

We claim that a theory of exemplar tropes affords a direct reflexive account of the reference of an exemplar to itself. But how exactly do we explain the process of exemplarizing a trope to represent a plurality of objects that are like the exemplar trope? The answer, if it is to maintain the representational and referential loop from the trope back onto itself, must be a process that uses the trope representationally to mark a distinction, to appropriate a notion introduced by Spencer-Brown (1969), between what the trope represents and other objects not represented by the trope. Reid (1785) argued that the process of representation involves two ingredients. The first is distinguishing the trope, though he did not use the term "trope," from other objects, which he called abstracting the trope, and the second is generalizing the trope to let it stand for a plurality of objects that are distinguished from others. It is tempting to attempt to bring in an appeal to properties at this point as the basis of generalizing. However, children, to say nothing of other animals, generalize a trope, responding to a plurality of objects in a way that they do not respond to others, thereby marking a distinction with the trope without any conception of properties or even predicates. Once a person generalizes a trope, he or she, may if he or she has acquired language, associate the generalized trope with a general predicate. Indeed, if the person has a conception of a property, the exemplarized trope may become associated with the property. The generalizing of the trope does not presuppose any conception of the property nor does it involve referring to any property in the

process of exemplarizing the trope to make it a symbol referring to a plurality of objects.

Moreover, an appeal to similarity, incorporated in the process of generalizing by Hume who noted the possibility of making a trope general in reference to a plurality, is also not presupposed by the exemplarization of the trope. The underlying cognitive psychology is controversial. But here is a theory, whatever the empirical merits, of how generalizing might lead to a conception of similarity rather the other way around. Once we have generalized from individuals and form general conceptions of a plurality of things, we may say that the objects are similar to each other, because they all fall under the general conceptions, that is, they are all in the marked space of the distinction drawn by exemplarizing. However, it is the generalizing, on this theory, that gives rise to the general conception and, therefore, to the conception of the similarity of objects represented by the exemplarized trope.

A realist about properties might object that one should not accept our account of generalizing a trope or the corresponding account of self-reference for tropes, for it leaves an important matter unexplained. In order for an exemplarized experience to be true of itself, it must be a general representation of what the experience is like. The notion of what an experience is like is just a special case of the notion of the way things might be that applies to things in general (Levinson 1978). What an experiential state is like is just how things are for the act of experiencing. When we say the wine is sour, we are giving the condition of the wine, specifying how things are with the wine, what way the wine is. When we say what drinking the wine is like, we are giving a condition of the experience, specifying how things are with this act of experiencing, what way the experience is, qua experience. Property theorists believe that in addition to the sailing ships and sealing wax, cabbages, and kings there exist ways that these things might be, their properties. They see explanatory advantages in accepting the existence of properties. They can offer that among the advantages of property theory is affording an explanation of something that must be a primitive for a trope theory, i.e., an account of the correctness conditions for generalizing an experience in one way rather than another.

Generalization from a particular thing involves grouping that thing with others that are, in the relevant ways, just like it. Property theory seems to provide an account of ways for things to be just alike and of how those ways of being alike become relevant to a particular act of generalization. Things are really alike, on their view, in virtue of sharing properties. Two bottles of wine can be alike in taste in virtue of sharing a property of being sour. An experience of consuming a sample of a sour wine, i.e., that is an instance of the property of experiential sourness, is correctly generalized if the experience is grouped with all and only experiences that are just alike in being similarly acidulous. The recipe here is that the subject generalizes an experience in a particular way when there is a property *F*, such that the application conditions of the general representation of this sort of experience specify, via a mode of presentation of property *F*, that all and only bearers of *F* are represented. This is the putative explanation of how some ways of being rather than others become relevant to a particular act of generalizing experience. The correctness is explained by saying that the generalization is correct when the generalized experience actually is an *F*-experience.

A trope theorist cannot say this sort of thing on pain of falsifying his trope theory. Trope theorists accept that there are sailing ships and sealing wax, and accept that things might be one way with them rather than another, but deny that the ways constitute another domain of things in the world that might have some independent explanatory role in our account of the world. The ground-level claim of our trope-theoretic account of the self-referential reliability of experiences, the claim that cannot be defended by appeal to something ontologically more fundamental, is that an exemplarized experience is like the experiences of which it is an exemplar because it is a generalization from what it itself exhibits to them. Thus, no matter the mode of generalization, an exemplarized experience will apply to itself. Since no theorist should be asked to give up his view in order to properly defend it, the property theorist cannot demand an explanation for why the exemplarized trope is an example of just these ways of being an experience rather than some other. That demand would beg the question against trope theory by presupposing the existence of properties. And what do we gain by incorporating properties into our account of reference? We gain an explanation of our powers of general reference by an appeal to similarity relations which are explained as sharing of properties. The cost of the explanatory benefit is the requirement to formulate, and defend as better than any available alternative, a substantive theory of properties. But all theories of properties are wanting. None answers all the questions that we think we are entitled to have answered by any adequate theory of ways things might be. And we submit that none is obviously superior to a trope theory that understands similarities among ways of being in terms of modes of generalization.

Of course, there is no argumentative advantage in begging questions in the opposite direction. We leave the issue of the existence of properties to metaphysics, noting only, as Reid did, that our conception of properties might play an important role in the way that we think about the world without presupposing that they exist. Properties may be useful fictions grounded in our ways of thinking about individuals and how things are with them. Our claim, not intended to resolve the metaphysical issue, is that there is an advantage to be obtained by linking our system of representation to individual exemplarized tropes for obtaining a truth connection between the exemplarized tropes and elements of our experience. The linkage of representation to truth in the exemplarized trope is the result of a form of reflexive exemplarization of the trope that secures self-representation without the mediation of another term, a property, or a predicate, whose application may go awry leading us to error. Exemplarization of tropes secures a truth connection as representationing trope loops back onto itself in self-representation without the intervention of another term.

Other philosophers, Schlick most notably, attempted to secure a truth connection by a special use of language. The intervention of language, however indexical, brings with it the hazards of the misapplication of language to world. The use of the trope as a symbol, as an exemplarized representation referring directly to itself, secures the symbol against the misapplication of a symbol representing something other than itself. It is perhaps an oddity that the nominalism of trope theory secures us against error by bypassing the representation of language and turning instead to the trope as the exemplarized vehicle of direct self-representation.

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Chapter 9
The Facts of Tropes

Herbert Hochberg

Abstract Kevin Mulligan's defense of a variant of trope theory is critically examined. It is argued that his account employing tropes, as opposed to facts, in the role of grounding the truths of monadic and relational predications is problematic and not a viable alternative to an account employing facts. A key point involves Mulligan's appeal to the concept expressed by the phrase "because of" in his rejection of facts as grounds of truth and his reliance on the Aristotelian notion of a nature. Further problems with trope doctrines are explored in connection with relations and causality as well as related arguments and views by other figures who have addressed the problems of predication and the status of facts.

Keywords Complex · Simple · Because · Truth-maker · Ground

9.1 Tropes or Facts?

Kevin Mulligan has played a prominent role in the expounding of a tropist view as part of the revival of metaphysics in the latter part of the twentieth century. Like other modern proponents of medieval tropes, he has sought to reject the need to recognize facts as basic entities of an adequate ontological inventory and of an adequate account of truth and the grounds of truth. In line with his rejection of facts—which were the entities, along with universals, that were crucial to the realistic revival that Moore and Russell brought into British philosophy more than a century ago—Mulligan has also argued against relations in a familiar medieval manner. The two attacks go readily together, as one need only recall that Russell based his cases for both universals and atomic facts on relations, as did Moore at places. This chapter examines the lines of criticism Mulligan has developed in a number of recent papers.

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The attack on facts argues that facts are not *ontologically fundamental*—and thus not *basic to* an ontological account of *what there is*. He considers what is required in setting out adequate ontological grounds for true propositions and argues that facts are not fundamental as truth-makers. While putting forth his views in several papers, his main line of argument is contained in a long passage in "Facts, Formal Objects and Ontology" of 2006.

> …I propose to argue that no fact is ontologically fundamental. Answers must therefore be given to the following three questions. What does it mean to say that something is ontologically fundamental? What are the most plausible candidates for the role of what is ontologically fundamental, if facts cannot play this role? How are the ontologically fundamental and the ontologically non-fundamental related to one another?
> We already possess the beginnings of an answer to the first question. Consider again
> (1) Sam is sad
> (2) The proposition that Sam is sad is true
> (3) The state of affairs that Sam is sad obtains
> (8) If Sam is sad and the proposition that Sam is sad is true, then the proposition that Sam is sad is true because Sam is sad
> (9) If Sam is sad and the state of affairs that Sam is sad obtains, then the state of affairs that Sam is sad obtains because Sam is sad
> (17) If the proposition that Sam is sad is true and the state of affairs that Sam is sad obtains, then the proposition that Sam is sad is true because the state of affairs that Sam is sad obtains
> The "because"s in (8) and (9) tell us that (1) is more fundamental than (2) and more fundamental than (3). The "because" in (8), (9) and (17) is the essential "because", not any causal "because". [The essential "because" is essential to a correct formulation of truth-maker maximalism. But it is not enough. The truth-maker principle itself holds *because of* the nature of truth and of propositions. This "because" is the "because" of essence. ….]
> As far as I can see, there is no true instance of
> (45) (1) because$_{\text{essential}}$ p.
> If that is right, then not only is (1) more fundamental than (2) or (3), it is fundamental. But what does it mean to say that something is *ontologically* more fundamental than something else and that something is ontologically fundamental *tout court?*
> The answer to our second question will help to provide an answer to this question. The second question was: What are the most plausible candidates for the role of what is ontologically fundamental if facts cannot play this role? Sam is ontologically more fundamental than any proposition and ontologically more fundamental than any fact.[1]

The reasoning is somewhat obscure as it relies on various themes he has elaborated elsewhere. But it is clear that the argument sets out three themes: *first,* whatever is meant by "ontologically more fundamental," an object O is taken to be *ontologically more fundamental* than purported facts about it, such as that O is *F*; *second,* that (1) above expresses a more fundamental claim than (3) does; *third,* that the essential sense of "because" is required for specifying viable ontological grounds of truths, such as that expressed by "O is *F*." While there are other aspects of his

[1] Mulligan (2006): I will not deal with his consideration of what he takes as the argument for facts from knowledge and the minor role that plays in his view. I will simply note that that deals with the possibility of having to specify what is involved in one's "coming to know something" in terms of the existence of a purported fact. As Mulligan does not see that facts are necessary for giving "satisfaction conditions" in such matters, they are not taken to play fundamental roles in the analysis of such contexts.

view, these three are crucial and ultimately rely on a notion that has persisted for centuries in spite of being both problematic and obscure. The notion of a *nature* or *essence* and its expression by the use of the phrase "because of" are at the core of his argument. This will lead to the claim that particular objects, like Sam and O, are composed of constituent particular tropes and that it is "because of" the object being so construed and the particular tropes that form it—essentially combine with each other to form it—that it can be truly said to be characterized by a predicate. Moreover, such properties, as particular tropes themselves, must also have natures, though they are not composites, in virtue of which they are accidents, are of the kind that they are and combine with the tropes they do. Given a tropist account and his Aristotelian essentialism, Mulligan does not really formulate an argument against facts being fundamental to a viable ontology. Rather, that they are not fundamental is presupposed in the assumptions of his tropist view that dictate the choice of terminology. As others see it, on such a view facts are simply compressed into the natures of tropes and into the standard objects such tropes form, such as Sad Sam. With facts so blended into things, they can be declared nonessential to an adequate account of truth grounds for atomic truths.

We can see what is involved by putting things in terms of monadic atomic facts. To say that such a fact obtains is simply to say that it exists. To say that it does not obtain is to assert that it does not exist. There is only a point to speaking of a state of affairs that "obtains" if one accepts, as I think Mulligan does, that one who speaks of states of affairs speaks of them as neutral with respect to existing or not—and hence acknowledges non-existents of some sort or in some way. Yet, the appropriate employment of a Russellian style definite description does away with such philosophically problematic additions.[2] Assuming, for the time, that the appropriate manner of specifying the fact that O is F is in terms of such a description, we can then take the fact to be described and specified by:

(R) the p such that O is its term, F is its attribute, and Φx is its logical form.[3]

Here "*p*" is a variable ranging over atomic facts. Abbreviating (R) by "(ι Ω)," we can express the existence of the fact by: (E) *(ι Ω) exists,* or, in Russell's notation:

$$(\mathrm{E}^*)\mathbf{E}!(\iota\Omega).$$

One can then specify a truth predicate for our prototype monadic atomic sentences along the following lines:

$$(\mathrm{T}) \quad \text{"O is F"} \textit{is True} \textbf{ iff } \mathbf{E}\ !(\iota\Omega).$$

There is no more need to introduce a primitive notion of "because" wrapped in essentialist terminology than to introduce atomic sentences as names of states of affairs that may or may not exist. (T) will do as a means of expressing an unproblematic but

[2] I have argued this in detail elsewhere and will briefly note why it is so below.

[3] To speak of it being specified by the description is to take the description to be the viable way to represent such facts.

viable *truth ground* for a monadic atomic statement. (T) is quite unlike a Tarskian T-sentence, but we can add a further clause to express the semantic link between such a truth predicate and the atomic statement. For while the quotation marks are understood to form an expression denoting another linguistic item, we do not get the familiar T-sentence from (T) as it is. Thus, if one desires to obtain such a result, we can do so by replacing (T) by:

$$(\mathrm{T}^*)\ \text{“O is F” is True } \mathbf{iff}\ \mathbf{E}\ !(\iota\Omega)\ \mathbf{iff}\ \text{O is F.}$$

(T*), as a semantic rule or postulate, expresses the *twofold* linkage of *what is said to be true* to both the *ontological ground* of its truth, an existent fact, and *the statement that it is true*. It provides the *additional* link providing the conventional T-sentence that involves both *representing* and *using* the atomic sentence.

The above pattern does not appeal to a mysterious essence or nature of truth—either of things or of facts. Yet it does what we expect any proposed analysis to do in that it fits our ordinary understanding and employment of concepts like truth. Nothing is gained by adding a claim about the essential nature of truth and introducing a primitive notion of *because* or *because of*. To do that would be like what some do when they proclaim a revival of *causal necessity*. As *essential necessity* purportedly explains why Sad Sam accounts for it being true that he is sad, so the *causal necessity* between F-ness and G-ness supposedly explains why “Every case of F is a case of G” is *a law* and not an accidental generality. It does so *because* it is taken to be the postulated relation between F and G (or between something being F and it being G) that explains why the generality is a law. We will consider this matter further later. The clearer, simpler, and more transparent move in the case of *truth* is simply to recognize that one *assumes* the relevant conditions for a truth predicate as a semantic rule—as in (T*). As Galileo and subsequently Hume noted long ago, appeals to necessary connections or unknown powers add nothing of substance to explanations of lawfulness. Yet, Mulligan’s essentialist notion of truth and account of tropes provide the basis for his attack on facts in that they are the grounds for his claim that an object O is more fundamental than the fact that O is F. One who accepts essential natures along with objects and tropes laden with them does not require facts, but neither such essences nor such tropes are acceptable.

Tropes aside, there is one sense in which an object may be said to be more fundamental than any atomic fact about it. It trivially follows from “**E!** (ι Ω),” using our description, that O exists and is a term of the fact. But this has to be irrelevant to whether or not facts are required and whether or not they are basic entities, in some important sense of “basic.” Aside from the *items of usage* involving the term “because” that Mulligan cites, his conviction that O is more fundamental than the fact that O is F can only be based on the simple point we have just noted.

In summary, his attack on facts is essentially threefold, as it comes down to (a) the innocent sense of the *dependency* of O’s being F on O, b) his acceptance of tropes and essences, and (c) the traditional dependency of properties and relations on their being instantiated by particulars—the so-called principle of instantiation.

Yet when diverse parts of his view are put together, while O will be classified as an "independent particular," it is also taken as a complex of tropes containing tropes that are *essentially connected* to each other or joined together. This essential, internal connection or dependency supposedly allows for the omission of a compresence relation or nexus that joins them into an object. Moreover, insofar as it is such a complex, an object like O would not be the same complex as a similar one without that particular F trope.[4] Hence, it is as much dependent on its being-F as its being-F is dependent on it—legislation about the mechanics of *dependency* and various kinds of *dependency* notwithstanding.

It is fruitful to compare his approach employing the *because* of essence with one using (T*).[5] Classifying *because* as a "formal" concept, he builds his discussion on a fundamental kind of dependency relation—the *inherence of* tropes in a subject. Such a relation of inherence spawns other relations—such as the connection between what truth is ascribed to and the ground of it being true. This makes use of the Tarskian format with an Aristotelian twist:

(M) "O is F" is True *because* O is F,

where *because* replaces the biconditional.[6] (M) reveals another problem in his linking *what is true* to its *ground of truth*. Any serious account of truth grounds, as opposed to truth conditions, goes beyond Convention-T and the familiar manner of introducing truth predicates into a schema via the biconditional. The problem is then to avoid appealing to nonexistent entities—or in Mulligan's phrasing—nonobtaining states of affairs. We do not avoid such entities if we simply introduce a *basic relation* on the order of a Carnapian denotation relation for proper names and primitive predicates:

(R1) "O" refers to (denotes) the object O
(R2) "F" refers to (denotes) the property F
(R3) "O is F" refers to (denotes) the fact that O is F.

[4] This theme will be expanded on in connection with the employment below of Russell's theory of definite descriptions. It is also complicated by dealing with objects and temporal alteration—Sam being sad at one time and happy at another. Thus, the problem of the self and "identity" over time arises. It is easier to focus on the basic issue if one considers momentary phenomenal objects, like color patches or sounds, rather than physical things.

[5] Mulligan bases the *essential because* on the "because of essence." What that amounts to is that appeals to the essential are based on the purported essence of something, which is embodied in its "nature."

> Now, the essential "because" requires the "because" of essence. For example,
>
> If the proposition that p is true because$_{\text{essential}}$ the state of affairs that p obtains, then (the proposition that p is true because$_{\text{essential}}$ the state of affairs that p obtains) because$_{\text{essence}}$ of the essence of truth and of propositions. (Mulligan 2009a, p. 9)

[6] Tarski had cited Aristotle on truth and taken his Convention-T to capture, in a sense, the Aristotelian theme that to say what is true is to say that what is is or what is not is not.

If we do so, we cannot take atomic sentences to represent corresponding existent facts—name them, as it were—as one can take proper names and primitive predicates to represent only existent objects and properties (relations), respectively. Forgetting about the dictates of ordinary usage, we easily follow Russell and take proper names to be correlated with objects and predicates with properties.[7] But, as atomic sentences can be false, a well-known problem arises. Thus, (R3) will not do as a semantic rule, assuming that *refers to* is taken as a genuine relation that requires viable terms. It forces the introduction of non-obtaining states of affairs or something similar. This is one thing behind the move to (T*) involving the use of Russellian style definite descriptions of purported facts.[8]

The point here is that the appeal to (M) does employ such a basic denotation relation, and Mulligan has to pay the price of recognizing the realm—or *mode of being*—of what is not.[9] In (T*), recall, we employ the familiar biconditional of logic and not a relation, as in (R3) or (M). As I see it, he actually employs (M) in the discussion covertly by taking Sam to be ontologically fundamental. Thus, Sam's state of sadness, contained in Sam, supposedly resolves everything. It is interesting to note how Peter Simons succinctly employs such a tropist account to resolve the problem of negative facts:

> For example, if Sean loves Máire then there is an emotional state or attitude of Sean towards Máire that makes this true. If she does not love him, it is because there is no such attitude of Máire towards Sean that would if it existed make it true that she loves him. Both the positive and the negative true relational predications are external, but only one has a truthmaker. (Simons 2010, p. 204)

It is because there is *not* anything of a certain kind, a trope of a certain kind, that we have the explanation of Máire's not loving Sean or Sam not being happy.

While some might take him to hold, as one commentator does, that facts "supervene" on objects, given his taking O to suffice as the truth-maker for "O is F," I do not think that the glib notion of *supervening* captures what is involved in his essentialism. This brings into focus another key aspect of Mulligan's line of argument. For him, in cases that we are considering, there has to be a trope, *the F-ness of O* in the present case, that makes O the truth ground, or maker, for the truth of the proposition. It is by such means that facts are purportedly avoided. But this brings us back to the long argued dispute about tropes being taken to ground their own sortal similarity to other tropes of the *same kind*—their providing the unity universals provide. That matter is beyond our scope here.

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[7] S. Mumford has sought to avoid negative sentences by metalinguistic manipulations and the use of "is False" in dealing with the problems posed by truth grounds and problematic negative facts. The metalinguistic manipulations were built around the claim that *p* being False is being such that there is no truth-maker for *p*.

[8] This is the point mentioned earlier regarding the key role of Russellian descriptions in avoiding the introduction of entities that are non-existents, yet required by such an account.

[9] For a discussion of J. Searle's somewhat strange reliance on Meinongian type entities, without apparently realizing just what he is doing, see Hochberg (1994).

I have mentioned that Mulligan's discussion sometimes appears to be based on a combination of stipulations and appeals to features of ordinary language. Thus, while

(s) Sam is sad because Sam is sad

is not in keeping with *the essence of truth,* it seems that

(s*) Sam is sad *because of* Sam

is so. Of course, in writing(s) we do not do violence to grammar, but we do pay the price of not being clear that we talk about what is true, with the first phrase-token, and what grounds truth, with the second occurring token. This is an aspect of the obscurity in ordinary usage that allows for the development of misleading lines of argument. Thinking along the lines of (T*) rather than in terms of an *essence of truth,* the problematic(s) would be replaced by

Sam is sad **iff** Sam is sad

or

"Sam is sad" is true **iff** Sam is sad.[10]

The first, while trivially true, is hardly relevant to discussing grounds of truth and is utterly useless as a Carnapian style semantic rule. The second, taken as a proverbial T-sentence, is likewise irrelevant to specifying grounds of truth.[11] However, if the right side of the biconditional is understood as representing a state of affairs, and hence something that is relevant to the matter of truth grounds, we have a relevant but problematic truth ground.

In (s*), we no longer simply have the repetition of the tokens of "Sam is sad," so we easily separate truth bearer from truth ground. Of course, one has to understand that Sam is taken with his inherent trope of sadness, and the ordinary sentential expression seems to stand for Sam being in a certain state, or, for many a tropist, "in" that object. It would perhaps be more straightforward to employ

(s**) Sam is sad because of Sam's sadness[12]

in place of (s*). But (s**) seems as ridiculous as (s).

Mulligan claims that *the* (his) truth-maker principle holds *because of* the nature of truth and of propositions employing the "because" *of essence*. This merely claims that there is a (formal)[13] concept of truth and that *its essence* reveals that the essentialist *because* must be employed in a viable account of the ontological grounds of

[10] Such examples from usage do not help as keys to philosophical issues. Consider "Life is sad because of life." A bit odd, more so than "Life is sad because that is life" or "Life is sad because it is sad."

[11] Recall Mulligan's (45) above and simply replace his $\text{because}_{\text{essential}}$ by the neutral biconditional together with its use in what is taken as a semantic or interpretation rule.

[12] Or, perhaps, because of *the way* Sam is or *of a trope* in him.

[13] As Mulligan uses "formal"—"Propositions, states of affairs, facts, concepts, classes and properties clearly all belong together. They are creatures of a kind. Call them *formal objects*." (2006, 2)

truth. It is all a bit circular and brings us back to constituent tropes and essences, as well as a good place to move on.

9.2 On Matters of Form

What is meant by taking forms like Φx to be logical forms, rather than properties? First, consider again the atomic fact that O is F. It is no more problematic to speak of the form, Φx, than it is to speak of the fact. One readily understands that O is F and B is G are of the same form. One can then hold that the form does not, in being the form of the fact, *form* a further fact—a fact that an atomic fact is of that form. That it is so is one thing meant by speaking of such a form as a logical form—as being a matter of the logic or analysis of facts and not a matter of fact. Second, one observes that it is a matter of logic, and not fact, in that a system of standard logic, dealing with predications, presupposes the subject–predicate distinction that is embodied in the triad: term, property, and fact. Consider the logical pattern—Φx v ¬ Φx. This being a pattern for logical truths presupposes the differences between terms, predicates, atomic sentence patterns, connectives, and so forth. To have a system with such expressive patterns requires formation rules and the logical distinctions they embody. Thus, the distinctions between subject, predicate, and sentence are, in one sense, more fundamental than the logical truths that make use of them. The formation rules, as well as the transformation rules, express logical necessities.

Assume, for example, that there is a basic relation of diversity holding between particulars. It is not clear that its being a dyadic relation relating particulars logically requires that it not be sensibly attributable to properties and relations. That can be reflected in a schema that ignores property types. Hence, where π may be a particular or a property and Φ is an attribute we could employ a single form Φπ, rather than a series of forms. That allows us to consider a simple point. Consider the logical form as a relation along with the pairs <F, a>, <F, G>. <a, b>, <a, a>, and <F, F> taken as subject–attribute pairs. To then speak of the two pairs of particulars as combining into a fact of the form Φπ is as senseless as taking F to exemplify a.

Plato was concerned not only with existence existing and difference being different from sameness, but with differences of *participation*. There was the participation of particulars, such as Theaetetus or instances like the *F-ness* in Theaetetus, and forms, the *F-itself,* and the participation of forms in forms. A similar question arises here, if one considers higher-order predications and questions regarding facts. Even in a schema that only reflects there being two types—one for particulars, the other for attributes—one can still not take exemplification as either a nonsymmetric or asymmetric relation. It is the restriction of the variable Φ to range over attributes that expresses the *asymmetry* involved—the asymmetry *between* particulars and attributes—*not* the asymmetry *of a relation*. This connects with a suggestion in Plato that participation of forms in forms is a kind of blending of forms to compose others. This may suggest an analogy with instances of particularized attributes that are held to compose objects—bundles of instances. Yet there is a clear difference

as the participation of particulars in forms—the exemplification of properties by particulars—generally involves contingent facts, while the exemplification of attributes by other attributes is, if not in all cases, apparently in most that come to mind, a matter of necessity. *Red is a color,* assuming color as a basic property of properties, is an example. The difference between atomic facts, as contingent entities and the seeming necessity of atomic sentence patterns with higher-order properties is an indication of the diversity of the senses of "exemplification" that are involved. The problems posed by such necessities are familiar. In the present essay, it suffices to note that such problems indicate a basic diversity between *exemplification* as a form of contingent first-order atomic facts and higher-order forms for properties of properties. Here, it has simply been argued that first-order exemplification cannot be regarded as a relation among relations, since one cannot meaningfully characterize it in terms of the standard logical properties of relations—reflexivity, asymmetry, transitivity, etc.

Wittgenstein took *color* as a logical property or form—common to the color properties. But he could not support the claim—and that may well have contributed to his attempt to expand the sense of "logical" to include the explicit and implicit rules of "use." Knowing the logic of color came down to knowledge of the correct use of color terms of the language. Admittedly, there is some similarity between the asymmetry of predication and the absurdity of taking C# to be a color lighter than red but darker than yellow. Yet, there is a striking difference. The ordinary formation rules embody the one. To get the other as a matter of logic we must incorporate the diversity between sound predicates and color predicates into the grammatical rules of a schema. Thus, we begin a game without, as the saying has become, an "exit strategy"—as even moral claims became grounded on grasping the correct usage of the vocabulary of evaluation.

The problems posed by apparent nonlogical necessities have long been there. It is interesting to recall that Russell had once held that such nonlogical necessities were simply well-ingrained empirical truths. He had a more extreme predecessor in Hume, who had questioned the necessity of the logical principles themselves. Basing his concern on the need to apply them in the process of reasoning and the lack of a sharp line between the *certain* and the *probable,* Hume argued:

> There is no Algebraist nor Mathematician so expert in his science, as to place entire confidence in any truth immediately upon his discovery of it, or regard it as any thing, but a mere probability. Every time he runs over his proofs, his confidence encreases; but still more by the approbation of his friends; and is rais'd to its utmost perfection by the universal assent and applauses of the, learned world. Now 'tis evident, that this gradual encrease of assurance is nothing but the addition of new probabilities, and is deriv'd from the constant union of causes and effects, according to past experience and observation.
>
> In accompts of any length or importance, Merchants seldom trust to the infallible certainty of numbers for their security; but by the artificial structure of the accompts, produce a probability beyond what is deriv'd from the skill and experience of the accomptant. For that is plainly of itself some degree of probability; tho' uncertain and variable, according to the degrees of his experience and length of the accompt. Now as none will maintain, that our assurance in a long numeration exceeds probability, I may safely affirm, that there scarce is any proposition concerning numbers, of which we can have a fuller security. For 'tis easily possible, by gradually diminishing the numbers, to reduce the longest series of addition to

> the most simple question, which can be form'd, to an addition of two single numbers; and upon this supposition we shall find it impracticable to shew the precise limits of knowledge and of probability, or discover that particular number, at which the one ends and the other begins. But knowledge and probability are of such contrary and disagreeing natures, that they cannot well run insensibly into each other, and that because they will not divide, but must be either entirely present, or entirely absent. Besides, if any single addition were certain, every one wou'd be so, and consequently the whole or total sum; unless the whole can be different from all its parts. I had almost said, that this was certain; but I reflect that it must reduce itself, as well as every other reasoning, and from knowledge degenerate into probability.
>
> Since therefore all knowledge resolves itself into probability, and becomes at last of the same nature with that evidence, which we employ in common life, we must now examine this latter species of reasoning, and see on what foundation it stands. (Hume 1888, Part IV, Sect. I, pp. 180–181)

Hume here appears to stretch the purported fallibility involved in the applications of basic logical principles in proofs to the simplest principles themselves. The constant correlations and habits developed from successfully applying them—reinforcement, as one says—is the apparent foundational basis for both the basic principles and their complex patterns of application in proofs. It is as if he proceeds, in the above passages, to suggest that the basic principles themselves are not more firmly embedded than what is derived from them and from the process of derivation itself. This is taken to follow since there is no point of clear separation between what is certain and what is not. Logical principles do not differ from the case of the addition of numbers he cites, as both operate in the context of a continuum that cannot clearly demarcate probability from certainty, and thus logical *certainty* itself *becomes* a matter of *probability*.

The examples of Russell and Hume are recalled to emphasize a simple point. Whether one is as confident of the necessity of what is totally red not also being totally blue as one is of simple laws of logic and elementary arithmetical truths and operations is not the point. The point concerns the account one gives of the kinds of truths that they are. There are compelling reasons for separating the logical from the nonlogical and arguments for linking elementary arithmetic to logic. The problems posed by the cases of colors, sounds, and so forth are well known. But simple claims about natures or essences are of no more help here than in the matter of truth. They just amount to another way of saying that certain truths are necessary even though they are not matters of logic. That is one reason, one must suppose, that they are still problems—as is the corresponding case of causal necessity. Hume, however, runs the question of necessity together with a feeling of certainty and takes the former in terms of the latter, as he had in the celebrated analysis of causality and the idea of necessary connection. Galileo had separated them by speaking of *understanding* or apprehending *necessity* as the *basis for certainty*. He did so in limiting *objective necessity* to *mathematics* (including *geometry*) and rejecting the traditional appeal to the necessity imposed by purported Aristotelian essences or natures.

Consider the so-called *First Principle* of a long tradition. However one phrases it, it is basically the principle of noncontradiction that Aristotle tried to prove but ended up repeating. It is also the basic idea behind a valid argument being so and a propositional tautology being a necessity—taking a denial, in either case, to result in a contradiction. It seems that we construe truth, falsity, and negation in such a

manner that we have the familiar truth tables. But thinking one clarifies anything by then speaking of all that being a matter of essences is to delude oneself, as Aristotle did when he thought he proved the principle of noncontradiction. The best we can do is to recognize that we understand what we do in terms of familiar logic, and the patterns of the latter provide a framework for seeing why various arguments we take to be valid are so—as well as clarifying puzzling cases. There is no penetrating to something more fundamental by seeking essences. The problem has always been to then try and justify the nonlogical necessities, held to be so on the basis of what Hume considered a sentiment of necessity or certainty, by construing them as logical in some sense or in some other way. Hence, the Kantian *synthetic* a priori, the earlier appeal to traditional essences not based on the ways of mind, the Wittgensteinian extended sense of logic, etc. Mulligan, in seeking to avoid the road to idealism that Kant paved, returns to the necessities of the Aristotelian tradition that Galileo rejected to help set the modern stage. Galileo pushed such necessities out of physics, but not out of metaphysics, and essentialist trope theories still employ them to reject the thoroughly a posteriori facts of the logical atomists. Thus, the F-ness of O could only be O's, and O would not be O without it. Moreover, I would assume that Sam's particular sadness of the moment would not be that sadness, if it was due to Maria's rejection of him rather than Bertrand's refutation of his argument.

Mulligan has not made a case against facts but argued from an account employing essences, tropes, and richly natured particulars to set out an alternative account of truth grounds that purportedly does not appeal to facts. While the type of ontology Mulligan avoids by his embracing of natures recognizes universals, particulars, and facts, we should recall that the facts involved are logically independent of each other and such that their terms, attributes, and relations are not necessarily bound to each other. In short, the facts are the atomic facts of Russell and Wittgenstein. It is thus not surprising that the old questions that plagued the Aristotelian tradition and gave rise to the rejection of causal natures in the Galilean approach to the laws of physics, and in the subsequent empiricist tradition in philosophy, are resurrected on Mulligan's view. His argument dispensing with facts as "fundamental" for specifying the truth grounds of atomic propositions rests on tropes and objects with essences rich enough to play the role of facts, with the added spice of a quantum of necessity. Yet there is a problematic feature of Mulligan's particular way of construing the object O as a complex of tropes t, t*, t***,… in the manner that he does:

> On the view I favour, an independent particular is composed of tropes that are specifically (or token-) dependent on one another…. An independent particular, like all particulars, is in time. But its inner internal relations are outside time. This is the grain of truth in the claim that a thing has a history but no temporal parts…. (Mulligan 2009b, p. 32)

Such a claim indicates that *each trope,* being a dependent entity, is essentially dependent on the object, while also being *essentially dependent on one another*. What that means to Mulligan, who follows Moore's analysis of "internal relation," is that it follows from t's existing that it is in a *formal relation of dependency* to O. To be dependent in such a way is for t to be such that its existing implies that it is in that relation to O, and hence that O exists. That implies, in turn, given how O is construed, that it follows that it is joined with the other tropes that it is in fact joined with—

those that combine to form O. Thus, the constituent tropes are essentially connected with each other, given the existence of O. But as he presents his view, there is a complication, for he speaks of ordinary temporally changing objects—in the manner one speaks of classical substances that change accidents or *have a history*.

> I shall assume that Maria's sadness depends on her in the sense that it could not have occurred without her, that Maria is independent of her sadness although not of all tropes. (Mulligan 2009b, p. 9)
> Mary's happiness depends on Mary, but she is independent of it, and the same goes for Erna and her happiness. It is because Mary and Erna are independent of their happinesses that the proposition is contingent and the relation between Mary and Erna is an external relation. (Mulligan 1998, Sect. 4)

It seems that he can hold to the contingency between Mary and her happiness simply because, as in views of the self like Sartre's, an ordinary object that is taken as a continuant is itself a complex of complexes of tropes that constitute its *stages* or developmental process.[14] The point can be simply illustrated if we consider a simple case of a red circle changing *its* color and the temporal sequence involved.

Assume we have the combination A, of a red and a circular trope "at a location" (or containing a location trope or however one construes such matters). Consider the subsequent combination, B, of blue and another instance of circularity at the location (or containing a location trope of the place sortal). One can take there to be a changing object that is construed as an object $\mathbf{O^c}$—an object that is a composite of A and B—call them its temporal stages (not parts, given Mulligan's mereological concerns about *part* and *whole*). So long as one does not hold that temporal relations between the red trope of A and the blue trope of B, for example, are matters of internal necessity (as Simons apparently does hold in his discussion of such temporal precedence, cf. Simons 2010, p. 208) one can take the change to be contingent. While I do not think Mulligan can consistently, or at least viably (i.e., non-arbitrarily) do so, that is a matter I can only indicate without adequately addressing.

I simply note that given the existence of O it must follow, for Mulligan, that t exists, if not $\mathbf{O^c}$. We can see that if we take the open and appropriate way of specifying such complex objects—really hidden facts of compresence—by means of a definite description and not a simple indexical sign or name. For such names are not used as mere indexicals designating basic objects. Employing descriptions, we immediately note a feature of the essentialist view, for using a description reveals that the claim that O exists logically implies that O has each of the properties on which the description is built.[15] In that simple and obvious sense (obvious since 1905), the existence of the object can be said to necessitate having its constituents. All the contingency, so to speak, is packed into the one existential claim—that O exists. Everything of any interest is already included, or can occur, *in* that existential statement,

[14] Some advocates of trope theories appeal to "nuclear" tropes in such contexts. This is an arbitrary complication of the appeal to natures and raises the problems posed by stipulating the members of such a nucleus along the lines faced by Meinongian defenders of nuclear properties.

[15] We bypass the eternal and obvious problem the essentialist faces: What properties go into the description? Those that serve to uniquely indicate it do not do as essential solely on that ground. So we are led into the mystery of what is essential as determined by one's metaphysical intuition.

and that statement is, at least apparently, a contingent truth. It is in a similar setting that an Absolute idealist takes a crucial step and uses the "internal" connection of relations, via relational properties (lover of Sam, far from Geneva, prior to being blue) to pack everything into each thing (or, at least, make them interdependent) and arrive at a doctrine of monads or at an Absolute Monad. However, it might appear that there is still some further contingent content to the essentialist view, since from t exists, we do not obviously infer that O exists. But that is mere appearance. For the view really involves denoting the trope designated by "t" as the unique Φ-kind trope that is *dependent on* or *inherent in* O.[16]

We can then see how one can be misled about contingency in terms of the earlier example involving A, B, and $\mathbf{O^c}$. Just take A as a stage of Sam (now $\mathbf{O^c}$) with a particular sadness trope, t, and B as a later stage without a sadness trope but with a happiness trope, h. Tropes being what they are and Mulligan's complexes being what they are, t requires the existence of A and vice versa, as h requires B and vice versa. *Sam's stages,* construed as complexes or objects, are not contingently sad or happy, given that Sam is construed as $\mathbf{O^c}$—as a complex formed from A and B. What one can hold is that, Sam aside, given that A exists B can exist or not. (One can also hold the same sort of thing about A with respect to another—earlier—stage if there is one.) Shifting between A and $\mathbf{O^c}$, by talking about Sam, we create a misleading discussion of contingency. I say "misleading" because one has to further do what Sartre does on his variant of the same pattern: introduce a series of complexes of complexes. Thus, Sartre arrives at his ever-changing ego that *is* a different self from moment to moment—the stranger *he* sees reflected in the mirror.

I am not here raising the familiar objection about the employment of a sortal term but merely noting the oddity that the objects distinguish the tropes that belong to them and supposedly both form and diversify them. The objects that are composed of them are ontologically dependent, in a clear sense, on their tropes. The oddity of a view like Mulligan's appears in the fact that his tropes are, in a very familiar sense, *ontologically more fundamental* than the objects they belong to—for *to belong to* is to inform and thus form. The dependency of the tropes amounts to their being taken as the entities connected to form a specific object—an object that is thus dependent on them. Of course, one may speak of "two-sided" dependency to purportedly deal with this. But, ultimately, an unheralded strength of the appeal to universals is their "independence" of specific particulars. That is, whether one holds to a principle of instantiation or recognizes the possibility of there being un-instantiated universals, universals are not, in any sense, essentially dependent on specific particulars. Mulligan's tropes, in being dependent particulars, are *essentially* connected to specific ordinary objects, which are also dependent on the tropes.

[16] Mulligan notes that tropes are indicated by descriptions: "One motivation for such a view is the undeniable fact that the definite descriptions 'Maria's sadness' and 'the colour of the book' are derived from sentences." (Mulligan 2009b, p. 8) He thinks of this as providing a mistaken motive for introducing facts.

9.3 Of Facts and Forms

If one construes exemplification in terms of logical forms—Φx, $\Phi^2 xy$,…, $\Phi^{\mu} x$,… ,μ—then there is a way in which Bradley's problem easily dissolves. Facts are indicated, on such a pattern, by definite descriptions specifying—the terms, attribute, and logical form of the fact. One thus employs the logical relations *term of*, *attribute of,* and *form of*. It will shortly be clear why these are reasonably held to be logical relations in yet another way.

Recall the description of the fact that O is F in abbreviated form—$(\iota\ \Omega)$.

One may take the Bradley problem to be the claim that a purported endless regress begins with a fact such as $(\iota\ \Omega)$, since a new fact, the fact that Φx informs *p,* is presupposed, and must be analyzed in turn. But given that the fact described exists—that E! $(\iota\ \Omega)$—it follows that the described fact is informed by Φx. No further fact is required given our taking the proper manner of reference to facts to be via definite descriptions of them, and not by taking atomic sentences to be names of purported states of affairs. The regress simply does not get started. The same is true in the case of purported facts that O is a term of the fact and that F is its attribute. This provides the basis for holding the relations to be "logical"—that such facts do not give rise to further facts built on the taking of monadic exemplification as a *relation*—whether of essence or any other sort.

The point is that in the present case one can give reasons, why the employment of logical forms in predicate place does not constitute a begging of the question as in other alternatives. Frege and Russell, for example, in effect issue a stipulation regarding the combining of diverse logical kinds, whether in the form of a need for completion or of the sufficiency of the things to join themselves. On the present alternative we obtain, via a simple result involving Russell's theory of descriptions, the result that the three statements—those regarding the described fact having F as its attribute, O as its term, and Φx as its specific form—necessarily, in the familiar sense of *logically necessary,* follow from the statement that the fact exists. They follow simply because they are all logically equivalent to that existential statement. Thus, we deal with a logical necessity that is a result of an analysis of the structure of facts along specific lines and the indication of the elements of the analysis in the description of what is thereby analyzed. It is not simply a matter of a stipulation, in the all too familiar manner, to resolve a problem.

Simons, in defending his version of a trope style account that is generically along the lines of Mulligan's view, has asserted that such an appeal to logical forms is mere hand waving. He may well be right, but I think not, and have provided one reason for not agreeing with him. There is another, perhaps more compelling, reason and the discussion of it will also serve to make a point about a familiar medieval view of relations.

The basic claim I want to make is deceptively obvious. Exemplification is asymmetrical, but not in an ordinary sense. For it is asymmetrical in a more fundamental way than standard relations, *like father of,* are said to be asymmetrical, where asymmetry is construed in terms of a relation obtaining in only one direction. A

more fundamental sense is illustrated by holding that particulars can only be *terms* of facts. That is, they *can exemplify* but *cannot be exemplified,* while only properties (relations) occur as *attributes* in facts and can both be exemplified and can exemplify.[17] Or, if one does not take there to be higher-order properties then, simply, particulars are the only terms and properties (including relations) are the only *predicables*. This partly echoes Aristotle's:

> There is, lastly, a class of things which are neither present in a subject nor predicable of a subject, such as the individual man or the individual horse. But, to speak more generally, that which is individual and has the character of a unit is never predicable of a subject. (Aristotle 1974, Categories 2: 1 b, p. 8)

In either case, whether there are higher-order properties or not, we have a logical distinction in the sense that particulars are not predicable while properties are *predicables*. That familiar theme provides the sense in which there is a more fundamental asymmetry between particulars and properties, that is not simply a matter of exemplification being an asymmetrical (or nonsymmetrical) relation in the familiar sense.[18] Exemplification is not asymmetrical in the standard sense. It is not since, if we take it to be so, we must allow for the statement that a property exemplifies a particular to be sensible. It must be taken to be so in order to hold that: for any particular x and any property Φ, if x exemplifies Φ, then not—(Φ exemplifies x). This allows "Φ exemplifies x" to expresses a logical possibility in the sense that atomic sentences express such possibilities. They cannot be formally contradictory. Yet, it is clear that no such possibility is expressed.

No such possibility is expressed in a twofold sense. Trivially there is no well-formed sentential expression for it, as "Φ exemplifies x" is gibberish. But it is not simply a matter of the semantics and syntax of the expression. In apprehending facts, we apprehend the distinction between predicables and terms of a fact. This is more readily appreciated in the case of relations. One can consider various other possibilities in many cases—the possible conversion of the relation, the possibility of another term having been related to one of the terms, and so on. One readily comprehends, in recognizing the distinction between the terms and the relation, that there is nothing one can try to consider as one of the terms *standing in the other* to the relation. This is a matter concerning the difference between relations and terms in facts—of relations as predicable entities—and not a matter based on language. The ontological point is expressed by the formation rules of a linguistic schema; it is not based on the latter. The point is the same in the monadic case.

To express the impossibility that Φ exemplifies x, we employ the formation rules of the schema, and hence it is impossible in a stronger sense than that in which a contradiction is not possibly true. A clarified symbolism cannot express a purported possibility that Φ exemplifies x. Thus, standard formation rules either do not allow

[17] Thus, one faces the complication of various forms of exemplification at diverse types.

[18] If one ignores types then one can allow "$(\exists \varphi, \psi)(\varphi\psi \ \& \ \neg\psi\varphi)$" and express that exemplifies, for properties of properties, is nonsymmetric. However, such a schema still embodies the underlying strong sense of asymmetry between what is a predicable and what is not, as we will still not have "$(\exists \varphi, \mathrm{x})(\varphi\mathrm{x} \ \& \ \mathrm{x}\varphi)$" as a formula.

the linguistic pattern "xΦ" or, if it is allowed, it is understood to be merely another way of expressing what "Φx" expresses—an alternative notation for the latter.

The claim being made above points to the sense in which exemplification is asymmetrical in a more fundamental sense than ordinary asymmetric relations are. That stronger sense is *shown,* or expressed, by a symbolism in which one pattern is well formed while the other is not. It can reasonably be said *to be a matter of logic* in that it is embodied in the formation rules of a schema containing standard logical patterns and is logically presupposed by such a schema's logical truths being just that. Thus, in a clear sense, the standard logical truths can be said to be dependent on such rules. To speak of "Φx v ¬ Φx" as a logical truth involves the recognition of the sentential components being well-formed combinations of subject and predicate signs. In short, the tautologies of logic require syntactical forms that can be taken to represent logical forms of facts and things—of particulars, properties, relations, dyadic facts, etc.

Exemplification cannot be taken as asymmetrical in a standard sense, even if the purported asymmetry is stated in a modal axiom proclaiming a necessary truth. Proposing such an axiom will still assume the formation rule allowing the problematic clause to be well formed. Moreover, taking *exemplification* as a relation obviously involves the context of a higher-order schema, since *exemplifies* crosses types of subject signs. So, trivially, one allows exemplification as a relation of higher type. One also requires allowing the formation of "xΦ," or some analog of it, in order to state the necessity of its negation—to state what it is that does not hold in any logically possible world. So one is forced to resort to something being *metaphysically impossible* or not holding in any metaphysically possible world, or grasped by one's metaphysical intuition, or some such phrase, rather than as logically possible in a standard sense of logical or in the stronger *logical* sense—*logically expressible*. Taking the stronger sense as *logical* is based on the fact that standard logical necessity clearly presupposes such a stronger sense. Moreover, the sense in which exemplification is then held to be asymmetrical can be taken, in turn, as a reason for holding that exemplification is not a relation among relations. One does not merely point to a way in which it differs from other relations or shares properties with them, for there is a fundamental asymmetry involved that is captured by the formation rules of a scheme.

A familiar nominalization pattern exhibits the uniqueness of exemplification in another way. Suppose, in Quine's fashion, one acknowledges the recognition of properties and relations by employing a sort of subject sign for them, the substantive term "redness" in place of the predicate "red," for example. One still has to have an exemplification predicate—for one needs some predicate, or an *arrangement* of subject signs, representing (expressing) *exemplification*—in order to express the combining of the various *sorts*. This is something like what is done in systems logicians call (many) sorted logics, in which you have (*subject*) domains of different sorts. In our case, the sorts are particulars and properties. The point is that exemplification stands out, for it cannot be taken as a further sort without introducing a further predicate (or using an arrangement of subject signs to express such a connection) to have sentences. You can put standard relations in as a sort (or as

many sorts) so long as you take exemplification as *n-adic* (or have various exemplification predicate). So, if one insists in Russell's fashion that each relation takes a specific number of terms, then you will require a variety of exemplification forms—a *potentially* infinite variety in principle. If you allow for an *n-adic* logical form with variable *n,* then one will do. That aside, there is a fundamental distinction of a logical kind that nominalization patterns miss. It is not just that one recognizes two sorts or types, at least. It is that all atomic facts logically require at least one predicable *item*. Whether there are facts of higher type or not, there certainly could be in a straightforward logical sense. After all, whether logic is restricted to first-order logic or not, we know perfectly well what higher-order logics are like, in certain respects. Schema of higher type are thus possible candidates for the improved or idealized schemata, expressing an ontology or metaphysics, that some of the metaphysically self-conscious neopositivists envisioned. Such schemata emphasize the point about an expanded notion of logical necessity and possibility. A schema that allows for higher-order atomic statements thus expresses the logical possibility of higher-order facts, and thus a sense of logically possible. In bringing in further logical types, one duplicates the strong sense of asymmetry that is expressed by first-type exemplification, for lowest-type attributes can exemplify second-type attributes but cannot be exemplified by them. Thus, there is a further form or set of forms for the exemplification of attributes of second type.

Russell's claim that his view of *relating relations* solves *the* problems posed by exemplification is seen to be inadequate in that it simply gives all relations a double role so that a relation both supplies the relational content for a fact and the unifying of itself to the related terms—the other components of the fact. But it is one thing for a relation to require a certain number of terms and quite another for it to be joined with such a number of terms into a fact. It is the latter that raises the issues about exemplification not the former.

Separating the roles, by recognizing the unique function of exemplification, emphasizes its logical difference from standard relations. A Bradley style point is thus emphasized. Exemplification cannot be transformed into a term—it is required as a unique *n-adic* logical form or in terms of a multiplicity of logical forms of diverse *adicity*. (The latter was something Russell worried about in connection with his requiring acquaintance with such entities, entities he took to be basic.) An aspect of this matter can be taken to be reflected by sorted logics, which Quinean style nominalization requirements make implicit use of in transforming the onus of ontological commitments from predicables, like *red,* to nominalizations of them, like *redness*, for, by taking nominalized predicates as subject terms that function only as subject terms, Quine's pattern requires one general connecting relation (or pattern of terms). This ironically serves to emphasize the uniqueness of an exemplification relation on a view recognizing universals in nominalized form. For, it is then a relation that cannot be nominalized and coherently used only as a subject *term*. It must play both roles or be joined by a second relating *predicate*, as the shadow of Bradley emerges.

It is thus not just a matter of saying that we should understand the claim about the asymmetry of exemplification along the lines indicated above. There is an (are)

argument(s) for doing so—since the asymmetry has to be understood as reflected by or built into the formation rules, and thus as logical in the strong sense. If it is not so understood, one faces a twofold problem. First, the need we noted earlier to appeal to some unclear notion of metaphysical or modal necessity. Second, that even with such a dubious form of necessity one must still recognize the possibility of properties exemplifying particulars in a strong logical sense and that the asymmetry (non-symmetry) is not even expressed by a standard logical truth but by a modal axiom or some claim about possible worlds.

The point, then, is that the appeal to a strong form of logical necessity is viably held to be a factor in the logic of predication in that it is implicit in the standard logical necessity as it is a logical condition of there being the standard logical necessities of predicate logic. Far from simply declaring something to be logically necessary and resolving a matter by stipulation, as Simons has suggested, I am not pointlessly claiming to *intuit* a metaphysical necessity or vacantly proclaiming a principle of ontology. Moreover, it is worth noting that what is taken as logically possible in the standard sense is not logically impossible in the strong sense, as opposed to the way purported metaphysical impossibilities are often construed. For what is declared to be metaphysically impossible is usually taken to be logically possible, which allows for introducing familiar and historically problematic *necessities*.

The point involved is not one that is a matter of language. Logical schemata require explicit formation rules. The question is what these reflect, just as one may ask what ontological significance is expressed, presumed, or reflected by various features of a system of logic—by logical truths, negations and bivalent logics, conjunctions, atomic sentences, logical forms, and so forth. It is the need for features of a schema to accommodate the fact that atomic facts are not mere aggregates of items, or mereological wholes, but that, in addition to having terms, properties, and relations they are of a specific logical form. What may have led Russell to hold that "relating relations" sufficed to resolve the Bradley style puzzles was his view that each property and relation was of a specific *adicity*. Thus, a relation being triadic, for example, can be seen as determining the specific relational form of the fact as well as contributing to its content.

There is also an interesting historical point involved. Some medieval philosophers took it for granted that relational predication required diverse subjects.[19] So it was understood that similarity and identity were not reflexive. A thing x is not (exactly) similar to itself but simply the kind of thing it is (this whiteness, a "thing in the genus of quality"). Likewise, a thing was not identical with itself, but simply numerically one (a numerical unit). Thus, the reflexive condition for exact similarity and numerical identity are replaced by being of a kind and being a one (this unit, object, thing). This move is adopted by some modern variants of trope theory that take the tropes themselves to be the truth grounds for two distinct tropes of

[19] "…since nothing one and the same is similar or equal to itself." Duns Scotus, Ordinatio II. d. 3, part 1, ques. 1, (18), in Spade (1994, p. 61). This does not bear on the acceptance or rejection of relational accidents (as, basically, monadic relational properties) by diverse medieval figures, such as Abelard and Ockam, who rejected them, and Duns Scotus, who accepted them.

the same kind being exactly similar and being diverse.[20] Then, the objection that such a view allows two logically independent claims (that x is diverse from y and that x is exactly similar to y) to have identical truth grounds is supposedly blocked. The claims are purportedly not logically independent since, given that x is exactly similar to y, it follows that x is diverse from y, for exact similarity is irreflexive. A relevant question then arises for the earlier discussion of exemplification. Can the medieval requirements about relations not being symmetrical be held to be logical, in the stronger sense that has here been claimed for exemplification? For they are clearly not logical in a standard sense.

It seems obvious that they are not so if we consider the case of identity and diversity. I take diversity to be the basic relation for a simple reason. Diversity has an empirical ground in that one is presented with two things being two and not one in experience, but one does not, or at least I do not, experience something being identical to itself. Perhaps that is why medieval philosophers tended to take self-identity simply in terms of *being one* (or a one). Self-identity is simply a matter of denying that a thing is diverse from itself. Moreover, claims about the logical properties of diversity and identity are familiar in discussions of the logical characteristics of relations, and not in posing paradoxes. Far more important is the fact that there is clearly no such presupposition made by standard systems of logic dealing with relations, as there is in the case of a formation rule about predicative juxtaposition. In the one kind of case, we deal with a particular philosophical thesis regarding the nature of relations; in the other case, we deal with a matter of intelligibility. Moreover, the attempt to incorporate such a theme into the logic of relations faces formidable obstacles in actually preventing, rather than being presupposed by, standard logical treatments of relational predicates.

The medieval theme was resurrected in Wittgenstein's *Tractatus* by his proposing a schema in which there would be no duplication of constants representing objects, and where quantified contexts like "$(\exists x)(\exists y).\varphi x \,\&\, \psi y$" were understood in terms of what is normally expressed by "$(\exists x)(\exists y)\mathbf{:}\ x \neq y \,\mathbf{\&.}\, \varphi x \,\&\, \psi y$." Whatever the insights expressed in such a theme, the rejection of the reflexivity of identity (and, perhaps, of reflexivity in general) revives a problematic medieval thesis, rather than uncovering a logical presupposition, for not only is that thesis not presupposed by the standard logic of relations but it is also not consistent with significant themes of the latter.

That particulars are what is not exemplifiable, while properties are what can be exemplified, not only embodies the asymmetry of exemplification but also points to why exemplification is not viably taken as a relation, asymmetrical or nonsymmetrical. This then becomes an aspect of the distinction between particulars and properties (including relations). Thus, of course, it is not a relation—that would be, in part, to explain it in terms of itself. That is, simply put, another aspect of the Bradley problem. This is also why the only reasonable alternative among trope accounts is to take tropes to be components of complexes of tropes that are taken to be ordinary

[20] This type of claim has been raised in defense of trope theories by taking a Scotist-type view of reflexivity with regard to exact similarity and numerical identity.

objects. By contrast, attributes being attributable are also what can have attributes. This is what leads some to speak of exemplification as nonsymmetrical. But this continues to overlook the point that one cannot even formulate the claim that a particular is exemplified by a property, even if one allows for only two types—particulars and properties of all *sorts*. In a rigidly typed hierarchy of properties, one could not formulate the familiar Platonic formulae regarding existence existing and difference being different from sameness. But that hardly provides the ground for an argument in the sense in which the incoherence of attributing particulars does.

The necessity of the asymmetry between a predicable and a term of a fact contrasts with the purported necessity Mulligan appeals to in his discussion of the essences of Sam and his tropes, as it contrasts with the purported logicality of the claim that relations require diverse terms. Both of the latter medieval themes have more in common with twentieth century attempts to reintroduce natural necessity into causal accounts. In the early twentieth century, a number of philosophers, including C. D. Broad and E. Husserl, appealed to a primitive higher-order relation of causal connection. Over a half century later, a number of others, including D. M. Armstrong, would also appeal to such a non-Humean solution of the issues posed by causality and causal connection. On such a view, one takes "N(F, G)" to express a fact that is the ontological ground for "all Fs are Gs" being a law of nature, rather than an accidental generality. It is in view of the relation N relating the universals F and G by *nomic necessity,* that we have the necessity of nature, though the fact itself may be held to be a synthetic higher-order fact. The problems with such a view are many, but a primary one concerns the relation N itself and the appeal to such a higher-order atomic fact to ground the truth of the generality that every F is a G. For the latter does not follow from the atomic higher-order statement without an additional premise, such as "N(F, G) ⊃ (∀x) (Fx ⊃ Gx)," or postulate of some kind providing the link. Armstrong, for example, has tried a forced reading of "N(F, G)" as: x being an instance of F nomically necessitates x being an instance of G. To aid that reading, one rewrites "N(F, G)" as "N(Fx, Gx)," as Armstrong went on to do. Yet, such linguistic manipulations and questionable readings of formulae to aid the packing of a conclusion into a premise resolve nothing. The problem is about the purported atomic fact being an adequate ground of the general truth without an *ad hoc* declaration that it simply is so. Packing declarations into reading does not establish that they are no longer declarations. Armstrong has also cited M. Tooley's claim holding that the higher-order relation is postulated as a theoretical entity between the first-order properties. It is an entity that is postulated to account for the fact that whatever is F is G. He adds, perhaps ironically, "much as we might postulate a dormative virtue in opium…." It then becomes quite clear that postulating the existence of "the" relation, taken to be represented by "N(Φx, Ψx)," really amounts to no more than the claim that: there is a unique relation R that holds between Φx and Ψx and its so holding *accounts for* the generality that—(∀ y)(Φy ⊃ Ψy) is *a lawful generality*.[21] Thus, N(Φ, Ψ) trivially becomes *the relation* such that any two properties stand in it if and only if *the fact* that they stand in that relation is

[21] On aspects of these problems see Hochberg (1967 and 1981).

postulated to account for an appropriate true law-like statement being a natural law. This no more rebuts the Humean tradition rejecting *natural necessity* than Mulligan has provided viable grounds for his rejection of facts (and relations) by reverting to the essentialist natures and necessities that Galileo removed from physics.

9.4 How Facts Get Fundamental

Facts may be said to be ontologically basic or fundamental in various senses. First, they will play a role in an adequate ontological account of truth. Part of what is involved in that claim is to viably argue that trope theories and other nominalist attempts fail to account for both monadic and relational true predications. This argument has been going on in modern times since the early 1900s. It was ushered in with the beginnings of analytic philosophy both on the continent and in England. Recognizing that one also recognizes that there is neither the need nor the possibility of going into that further. Second, they are required for an adequate account of thought and its relation to what is thought about—for intentionality. Third, they are required to adequately account for our apprehension of what are obviously relational situations in our experience. We experience relations as well as terms of them, though we do not experience there being universals. That is something one must argue for. I have tried to do so here by indicating problems with the type of reductive proposals that have long failed to convince proponents of universals. This is not a matter of providing an analysis of "knowledge" and conditions of correctness, as Mulligan deals with such epistemological matters, but of merely accounting for *the facts* of common experience.

Facts are entities that have other entities—objects, qualities, and relations—as terms and as attributes *connected to* them. But facts are also taken to be of a specific logical form, as traditional substances were held to be "informed." Yet facts are not, as traditional substances were, "informed" by properties or natures—merely by logical forms. But whereas the traditional notion of informing or inhering is problematic, the notion of logical forms employed here is not, or so I have claimed. It is often noted, in various contexts, that the notion of simplicity is far from simple. With respect to facts, the question of simplicity is hard to separate from the question of being basic, and the problem of simplicity becomes obvious in a quite precise sense. Atomic facts are simple in that (1) they do not have other facts as constituent terms, (2) their analysis does not take them to be mereological compounds of their components, (3) they are terms of the logical relations—*term of* and *attribute of*—and are of specific forms, and (4) the term(s) and attribute (relation) are not connected by a further relation to form the fact. Yet, they are not simple in that they are "determined" by the set of items specified in their description—one that specifies their term(s), predicable and form.[22] The latter point requires explanation. It has been argued by some that facts must be recognized since, given a nonsymmetrical

[22] On some other matters of simplicity and facts, see Hochberg (1961).

relation R and terms a and b, we cannot, from the list of items R, a, b, determine that the list is correlated to Rab, rather than Rba. Nor can we do so by adding the logical form. Yet, if we recognize the need for including ordering entities in the analysis of relational facts, we can determine, from an appropriate list—one that includes the account of order in the fact—whether Rab or Rba is the purported fact indicated. That issue I simply note here, without taking it up. I also note that one cannot viably argue that Rab simply differs from Rba, for one must give an account of the relational order of such purported facts. Giving such an account would then indicate another sense in which facts can be taken to be complex—that there is an order involved—and there are clearly still further senses in which they may be said to be complexes.

Facts, having *terms* and *attributes,* can be said to have *components*. Thus, one can hold they are complex, as that notion has been generally used, as they are structured and the perspicuous signs for them are likewise complex—indicating their connection to terms and attributes. Yet, the logical forms of facts differ in a significant way from the logical forms of particulars, attributes, and relations—a way that is the basis for not taking facts to be viably nameable, whether by atomic sentences or some form of simple sign. The first point is one that requires no elaboration, though one can note differences, as some philosophers have put it, between speaking of *constituents* and *components*. The second point is another matter. Particulars and predicables are of different logical kinds; however, we take particulars. For a particular is an entity that *can* only be a term of a fact, and not what is a predicable. An attribute or relation, by contrast, is what can be *the predicable entity "of"* a fact. If one recognizes higher-order predicables then such an attribute or relation of one fact can also be a term of a higher-order fact. Thus, particulars and attributes are of fundamentally different *logical* kinds—reasonably taken as differing in a logical or *formal* way.

The above discussion of causal necessity as a higher-order universal is along the lines MacBride uses in dismissing, rightly, the way some trope accounts pack needed powers and truth grounds into the natures of tropes. It is also along those lines that he wrongly dismisses the appeal to facts as truth grounds, which he sees as doing the same sort of thing (MacBride 2011).

One difference has nothing to do with providing purported truth grounds but much to do with ontology—characterizing the world as it is in terms of what a viable ontology must recognize. One argues for the existence of universals in terms of apprehending an apparent sameness of attribute that two objects or two facts have, and accounting for that sameness or likeness, if one prefers. That is not the same as speaking of the truth grounds for two statements ascribing predicates two things. But, the two are easily mixed.

The revival of metaphysics in the second half of the twentieth century in English-speaking lands is connected to the rejection of the extreme nominalism and pragmatic idealism of Quine, Goodman, Sellars, Davidson, and their legions of follower, that dominated what interest in ontology there was at mid twentieth century. Recall Quine's slogan—"To be is to be the value of a variable"—and the predisposition for first order logic linked to it.

When philosophers awakened to question the dogmas of the time, a natural target was the talk of truth conditions, in the fashionable way, and the ignoring of what Russell had called the "makers of truth." Rediscovering Russell from "the silence that now virtually blankets Russell's name at Oxford" (as Gustav Bergmann once put it) was part of recovering the philosophical heritage in the English speaking nations. It included recovering Russell's writings in the early twentieth century that culminated in the logical atomism essays and returning to reconsider ideas of the "early" Wittgenstein of the *Tractatus*. Facts, as truth grounds, came back in fashion. But focusing on truth grounds overlooked another fundamental feature of the early years of analytic philosophy—the focus on what is directly apprehended. For Russell, relational universals and facts were both entities that one so apprehended.

Thus, they were part of any adequate account of what there is or has to be accounted for. Russell's classic argument for relational universals, earlier set down by Moore, does not speak of grounding true statements but of the *immediate apprehension* of color *similarity*. Other arguments for relations involve the analysis of what is involved in the immediate apprehension of a fact or event, such as one tone preceding another. Such matters point to the need to account for and accommodate the basic features of experience. Thus, one argues that facts are necessary to do that, as Russell argued that relations were. One can also argue that they are required as truth grounds for atomic statements—but that is another issue and argument.

This has an important consequence for considering MacBride's line of argument, besides the point that truth grounds are not all that matters. The appeal to a primitive relation of causal necessity is ad hoc, for the reasons noted earlier. The reason it is so is transparent from the laying out of the definite description specified in the above discussion. The situation is quite different in the case of facts. The fact that O is F, where O is a presented object and F is its color, is given in experience. It is not postulated as "the entity such that it makes true the sentence that 'O is F'," though it can be described that way, just as I can also describe O as "the object that is F and which I presently apprehend"—or some such thing. That is what it is, in some sense of "is," as it simply is *that* or O, in another sense. That is what we start with. We can then proceed to question whether it is a bundle of properties, on analysis, or composed of tropes, or whatever. *But we start with O, F, and the fact that O is F*. All are "objects" of experience. We then proceed to deal with questions about whether F is a universal or not, whether the fact is reducible to other entities or not, and so on. The case of causality—of laws and causal necessity—is quite different.

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Chapter 10
The Transcendental Metaphysic of G. F. Stout: His Defence and Elaboration of Trope Theory

Fraser MacBride

I should have never expected so sensible an election for Oxford, the way they have been going on lately.
(McTaggart on Stout, 1899)

Abstract G. F. Stout is famous as an early twentieth century proselyte for abstract particulars, or tropes as they are now often called. He advanced his version of trope theory to avoid the excesses of nominalism on the one hand and realism on the other. But his arguments for tropes have been widely misconceived as metaphysical, e.g. by Armstrong. In this paper, I argue that Stout's fundamental arguments for tropes were ideological and epistemological rather than metaphysical. He moulded his scheme to fit what is actually given to us in perception, arguing that our epistemic practices would break down in an environment where only universals were given to us.

Keywords Stout · Moore · Tropes · Universals · Perception

10.1 Introduction

Are the characteristics of concrete things particular or universal? That was the question G. E. Moore and G. F. Stout arrived at in Durham in the summer of 1923 to settle. Exchanges with Bradley, Russell and McTaggart had already won Stout the éclat for holding that every character of a concrete thing is particular and not universal. But Moore pitched his pavilion at the other end of the Northumberland field, insisting that every character is predicable and everything predicable is universal. To many British philosophers it seemed that Moore's arguments carried the day. Witness Ramsey's cursory dismissal 2 years later of Stout's view that qualities and relations are all of them particular; Ramsey paused only to note that "Dr Stout has been already sufficiently answered" by Mr Moore (1925, p. 402). The result was the ubiquitous neglect by an upcoming generation of the possibility that characteristics are particular.

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It is curious therefore to discover upon dusting off the covers of the third supplementary volume of the Aristotelian Society—that includes the record of the Moore–Stout dispute—that so far from carrying the day, Moore's arguments mostly missed their mark.[1] According to Stout, each particular red thing has its own particular redness (a trope). Moore took this to mean that "an absolutely specific character, which characterizes a concrete thing, *must* characterize one thing only" (Ramsey 1925, p. 104). And this, Moore found to be absurd because it is quite evidently a logical possibility that more than one thing partake of an absolutely specific shade of red. But this mistook what Stout meant when he said that the characters of things are particular. He *did not* mean that if two things are red then one must have a different shade from the other. He meant that even two things that have exactly the same shade have separate characters, albeit instances of the same class or kind of character. According to Stout, when we say that red things partake of the same shade, we are saying something elliptical: "We must mean not that there is one numerically identical quality in all, but that each possesses a quality of the same sort as a quality belonging to each of the others" (1952, p. 80).[2]

Kevin Mulligan has speculated that Moore and Stout talked past one another because Stout had a very different perspective upon perception to Moore—Stout had been a psychologist, an Anderson Lecturer in Comparative Psychology at Aberdeen and the first Wilde Reader in Mental Philosophy at Oxford before turning metaphysician in St. Andrews (Mulligan 1999, p. 172).[3] The diagnosis is characteristic of the man and the contribution he has made to our understanding of the history of analytic philosophy, helping us see that our familiar cartoon histories of superheroes and supervillains will not do: that many other contributing characters and intellectual forces have shaped us to become what we are now.

In the present chapter, I pursue a project that I hope will interest Mulligan and complement his own speculations about Stout: to lay bare some of the epistemological roots covered up by the sands of time and neglect, roots that sustained Stout's metaphysic of particular characteristics.

[1] A fact that was lost neither on Segelberg (1947, p. 156) nor on Williams (1953, p. 13), two of the twentieth century's leading trope activists.

[2] This remark is drawn from the Gifford lectures (*God and Nature*) that Stout had delivered at the University of Edinburgh in 1919–1921. The lectures were only published posthumously in 1952.

[3] Stout's works on psychology include his Analytic Psychology (1896) and Manual of Psychology (1898). It is a further part of Mulligan's diagnosis (that unfortunately remains unpublished) that Stout qua psychologist was heavily influenced by the writings of two pupils of Brentano: especially Stumpf's book on spatial perception (1873) and Husserl's Logische Untersuchungen (1901), on which see Mulligan (1995). See Valentine (2001) for an account of the contribution made by Stout to the development of cognitive science.

10.2 Stout overcomes the Particular–Universal Distinction

When Moore and Stout rode into Durham in 1923, Ramsey was shortly to become famous for advocating scepticism about the traditional distinction between particular and universal; so far as Ramsey was concerned "The whole theory of particulars and universals is due to mistaking for a fundamental characteristic of reality, what is merely a characteristic of language" (1925, p. 405). But the particular–universal distinction had been already put under pressure some years before by Stout—differently but arguably for deeper reasons.

Stout took as crucial test cases what Russell called "intuitive judgements of perception", i.e. judgements in which a character is affirmed of a given sense-datum. According to Russell, as Stout understood him, these "characters or attributes are always general, whereas the sense-datum we are acquainted with is not general but particular" (Stout 1914–15, p. 348). But Stout insisted that Russell was wrong about this: "Both the sense-datum and the characters asserted of it are in the same sense particular and in the same sense general". Indeed Stout went so far as to affirm that, on his view, "The distinction between subject and attribute would be abolished in the limiting case of a subject with a perfectly simple nature" (1914–15, p. 350). Concerns about how to handle the interrelated dichotomies between *particular* and *universal, abstract* and *concrete,* and *particular* and *general* were already a long-standing preoccupation for Stout. Contrasting his own view with that of Bradley's *Principles of Logic* (1883), Stout had written a decade earlier: "What is concrete is particular. But we cannot affirm that whatever is particular is concrete. The roundness of this or that orange, as it exists in the orange, is particular. But it is not concrete. It is not concrete, for the reason that its particularity is derivative. It is particularised not only for knowledge, but in fact, by its being a partial feature of the particular orange" (Stout 1901–02, p. 1).

It is his conception of what is given in perceptual experience that provides Stout with the immediate reason for casting doubt upon the distinction between subject and attribute. Of a subject that remains once the characteristics of the sense datum have been taken away Stout reports, "I can find no trace"; "Except such attributes" as colour, size and shape "there is nothing that I am immediately acquainted with" (1914–15, p. 348). Stout was correspondingly wary of admitting particulars conceived as bare bearers of characteristics (Lockean substrata): "it is plain that an actual content of immediate experience, such as a present sense-datum, cannot be identified with the bare abstraction of Locke's formula" (1952, p. 73). But nor, Stout maintained, are we acquainted with attributes *as such* either: "it is pure mythology to suggest that besides the particular red we are also aware of a shadowy counterpart of it called redness, in the form of a floating adjective hovering over this and all other particular reds" (1914–15, p. 349). This meant Stout was wary too of admitting universals conceived as separate but common to many distinct particular things.

Stout accordingly moulded his metaphysical scheme to fit what actually was given in intuitive judgements of perception, *viz*. characters as particular as the things

they characterise. Stout's metaphysic thereby cuts across the particular–universal distinction as traditionally conceived whereby characters are universals whilst particulars are not characters.

10.2.1 Stout's Ideological Insight

The shift in intellectual key that made it possible for Stout to avoid the untenable dualism, as he saw it, of Russell's philosophy—of particulars on the one hand and universals on the other—has never really been properly acknowledged as a shift Stout made.[4] Let me begin by explaining things from our end of history. It has become a commonplace of contemporary metaphysics to recognise that there is more than one way that an effort at systematic philosophy may account for a purported fact (Lewis 1983, p. 352). It may do so by giving an analysis. Or it may simply take the fact as primitive. Quine famously offered an account of the latter style when he refused to analyse the fact that (e.g.) many things are red in terms of the instantiation of a common universal redness, instead taking the fact that all of them are red "as ultimate and irreducible" (1953, p. 10). But Stout, ahead of Quine, had already refused to analyse the "unity of a class or kind" in his efforts at systematic philosophy.

According to Stout, "The unity of a class or kind is quite ultimate and that any attempt to analyse it leads to a vicious circle" (1921, p. 384). And this was only one of a manifold of forms of ultimate unity that Stout recognised: "There is the unity of a successive series; there is the unity of a spatial complex, there is the unity of characters belonging to the same thing" (1952, p. 79). For Stout, this conception of classes, kinds, series, material things, etc. was of a piece with the more familiar empiricist conception of the self as a bundle of experiences rather than a mysterious soul standing behind them: "just as the unity of a triangle or a melody or of an organism consists merely in the special mode in which its parts are connected and correlated so as to form a specific kind of complex, so the unity of what we call an individual mind consists merely in the peculiar way in which what we call its experiences are united with each other" (1911, p. 358).

[4] It would be going too far to say that this shift in key had never been noticed by anyone. D.C. Williams heard it but only as a disharmony. About Stout, Williams remarked, "His theory of abstract particulars…is almost identical with the one I am defending; if there is a difference it is in his obscure idea of the class as a unique form of unity not reducible to similarity" (1953, p. 12). O'Connor heard the shift in key too, "Every philosophical theory has to take certain concepts as basic and unanalysable, just as every logical system has to assume certain primitive ideas and unproved postulates", but he questioned whether distributive unity conceived as a primitive concept contributed towards an ideologically economical theory (O'Connor 1949, pp. 64–5).

10.2.2 Stout on Bradley's Regress

The necessity for recognising that there are ultimate and irreducible forms of unity had been impressed upon Stout whilst thinking through what he took to be wrong with Bradley's regress. Bradley came up with this argument to demonstrate that the very idea of a relation was absurd. He supposed that if some things are connected together by a relation then there must be a further relation that connects it to them. But this relation must itself be connected to the items it relates, forcing us to continue positing relations without end. Bradley's beef here is not with there being an indefinite plenitude of such relations. It is with the fact that positing them never enables us to account for a relation and its terms being connected together in the first place. If we allow ourselves to be caught up in the eddies of Bradley's regress, then we will go on recognising more and more relations; but what we thereby recognise will never add up to something unified. Bradley concluded that the very idea of a relation being used to account for how things are connected together was confounded by a dilemma: "If you take the connection as a solid thing, you have got to show, and you cannot show, how the other solids are joined to it. And if you take it as a kind of medium or unsubstantial atmosphere, it is a kind of connection no longer" (1893, p. 33).

According to the historical reconstruction I am putting forward, the best way to interpret Stout is to attribute to him the insight that we can avoid the horns of this dilemma by taking the unity of a relation and its terms as primitive, thereby impugning Bradley's slight upon relations. To Bradley's question, "What connects a relation and its terms?" Stout answered, "There is no intermediate link, and that there is need for none. For the connexion is continuous, and has its ground in that ultimate continuity which is presupposed by all relational unity" (1901–02, p. 12). What Stout means here by a continuous connexion is a connexion that is not mediated by anything else. By taking a relation as continuously connected to its terms, Stout avoided the need to posit a further relation to connect it and its terms; so Bradley's regress could not kick off. But this did not mean that Stout had shirked the obligatory task of providing an account of how a relation and its terms connect together. Stout did give a conscientious account of the matter, albeit not an analysis, because his theory takes the unity of a relation and its terms as ultimate and irreducible. He was later to express his account of relational unity thus: "A relation considered as subsisting between terms presupposes some complex unity within which both the terms and relations fall. This complex unity is the *fundamentum relationis*" (1921, p. 388).

10.2.3 Stout on Nominalism

The insight that unity stands in need of an account that is not an analysis can also be seen as operative in Stout's critique of nominalism. Berkeley's nominalism is Stout's immediate target. Berkeley had offered an analysis of general ideas according to which an idea of a given triangle can be taken as representing *all* other figures

which resemble it in a certain respect. But Stout insisted that this could not be a satisfactory point to terminate our enquiry into generality. This is because "unity is signified by such words as "all", "every", "any", "some", and the indefinite article" (1921, p. 387). But Berkeley was beggared to provide any account of this unity—what we might describe as the universe of discourse presupposed when a quantifier word is used. This is because "all" is itself deployed in Berkeley's analysis of general ideas and Berkeley cannot avoid this circularity by offering an enumerative analysis of the quantifier because, as Stout pointed out, we cannot plausibly be taken to "severally apprehend" each thing in the universe of discourse. We might hope to get around this problem by taking the universe of discourse associated with a quantifier to be a single object, *viz*. a class. But, as we will see, Stout did not conceive of a class as a single thing; for Stout a class is nothing but the unity of its members; so his positive proposal is most charitably interpreted as being that the unity associated with a quantifier is primitive.

I do not mean to suggest that Stout had the idea that unity is primitive fully under his control. He did sometimes err, falling back into a manner of speaking that suggests unity admits of an ontological analysis. But usually these slips are no more indicative of confusion than the fact that Russell and Whitehead often made slips when it came to use and mention—usually these slips arise in circumstances where exact expression would be unduly cumbersome. The fact of the matter is that Stout *did* take a decisive step toward appreciating the extraordinary power of the idea that unity is primitive.

10.2.4 Stout on the Monism–Pluralism Debate

A wide-angle view upon his philosophy: By recognising that there are ultimate forms of unity, Stout hoped to find a *via media* that avoided the excesses of old-fashioned monism on the one hand and new-fangled pluralism on the other (1921, pp. 393, 402–3; 1952, pp. 38, 53, 81). He hoped it would enable him to avoid the excesses of monism because it would allow him to admit a sense in which the universe is one, i.e. a unity, without having to deny that there is genuine plurality of different things. But he also hoped it would enable him to avoid the excesses of pluralism too, allow him to acknowledge that there are many different things without having to suppose that the universe is a mere plurality. By adopting an account of unity that was not an analysis, Stout advanced an approach that was intended to be more nuanced than that of his rivals: Whilst an ontological pluralist, he remained an ideological monist.

10.2.5 Distributive and Concrete Unity

How did recognising ultimate forms of unity enable Stout to overcome the untenable dualism of particulars and universals? Universals are typically posited to explain

how it is possible for different things to resemble one another—because each of them partakes of the same indivisible universal. Philosophers who posit universals to explain resemblance typically regard abstract nouns, like "redness" or "squareness", as singular terms that stand for them. But the apparent necessity to posit universals to account for resemblance disappears once it is recognised that the particular characters actually given in experience admit of a "unique and ultimate form of unity" of their own—that Stout dubbed "*distributive*" (1914–15, p. 348; 1921, p. 386).

It is because (e.g.) particular red characters exhibit distributive unity that they are aptly described as instances or examples of the same sort or kind, *viz*. red. Their unity is "distributive" in the sense that the different elements of this unified plurality are distributed amongst many different things, each red thing having its own quite separate part of the plurality, its own particular red character. Different things resemble one another because they have particular characters that belong to the same distributive unity. So there is no need to posit universals and abstract nouns, like "redness" or "squareness", which are therefore regarded by Stout not as singular but as "general terms" that denote all of the characters that exhibit the relevant distributive unity (1921, pp. 386–7). Stout does not deny that there really are universals, preferring to state his view by saying instead that "the universal is a distributive unity" (1921, p. 388). But here Stout is most charitably interpreted as treating the word "universal" as an incomplete symbol, one whose significance is exhausted by statements that describe the distributive unity of particular characters, rather than a noun that describes shadowy things standing behind these characters responsible for unifying them.

Particulars are typically posited as the underlying subjects responsible for binding the characters of a concrete thing together. They are also posited as the underlying substrata that persist though change in qualities. But Stout argued that recognising another form of unity as unique and ultimate obviates these posits too: "There is no need to consider the subject as being something distinct from the total complex of its characters. What we call the characters or attributes of the same subject are united with each other by a form of unity as peculiar and ultimate as that which I have ascribed to a class or kind" (1914–15, p. 350; 1952, pp. 73–4). The distinctive unity in question Stout dubs "*concreteness*" (1902–03, p. 1, 1921, p. 393). Because the unity in question is ultimate, there is no need to posit further entities to bind the qualities of a thing together. Nor is there a need to posit anything to serve as a substratum of change. It was a long-standing view of Stout that a thing persists because the concrete unity that constitutes it admits of systematic patterns of variation in the particular characteristics that it unites: "A material thing is a complex of sensible qualities, and that within this complex there is a central core constituted by visible and tangible qualities which have spatial extension and position, and are spatially coincident and co-extensive. Other sensible qualities are more loosely attached to their central core. They are attached to it in so far as their appearances disappearances and variations are connected in definite ways with change in it, and in its spatial variations" (1900–01, pp. 2–3).[5]

[5] So I read Stout as anticipating Peter Simons' "nuclear trope theory", according to which an ordinary thing that is constituted from a bundle of essential tropes, a "nucleus", acts as the substratum of a looser bundle of accidental tropes (see Simons 1994).

10.2.6 An Alternative Interpretation of Stout

I have advanced an interpretation of Stout according to which "thing" and "universal" are incomplete symbols. There are no things or universals conceived as independent pieces of the world's furniture. There are only particular characteristics. But some of them are united differently from others—some distributively, others concretely.

In advancing this interpretation, I diverge from another put forward in Maria van der Schaar's unsurpassed study *G. F. Stout's Theory of Judgement and Proposition* (1991). She argues that, according to Stout, a universal, such as whiteness, is a special kind of whole, albeit with its own distinctive form of unity (1991, pp. 140–3). She bases this interpretation upon the following remark from Stout's Gifford Lectures of 1919–21: "It [whiteness] is a whole with parts which, being abstract, are called "instances" of it and not "members" of it. Every particular white thing literally participates or shares in the universal whiteness. For each has a particular character which is a particular instance of it. Each possesses a part of it and none possesses the whole" (1952, p. 80).

But this remark does not, I think, reflect Stout's considered position according to which "whiteness" is a *general term* that denotes the plurality of particular whites. It is not a singular term that stands for anything, not even a whole. In order to get clear about this, we will need to bring into the foreground an aspect of his case against universals that Stout conceived to be of "vital importance to my general argument", *viz*. that the realist cannot account for the peculiar and unique relationship to be found amongst determinates and determinables (1921, p. 395).

10.2.7 Stout on Determinates and Determinables

According to realism, red things resemble one another because there is a common universal, a determinate, belonging to them, the universal *red*. But red things also resemble yellow and blue things; they are all coloured things. By parity of reasoning, they resemble one another because there is common universal, a determinable belonging to them that is responsible for their being coloured, the universal *colour*. Stout considered determinables such as *colour* or *shape* to be of dubious standing. And he argued that once this was recognised one did not need to be Argus-eyed to see that his account of distributive unity was the only credible treatment of resemblance and predication left standing (1921, p. 397; 1923, pp. 117–8; 1936, pp. 4–8). The way that Stout told the story, W. E. Johnson had scored an own goal for realism with the recent publication of Part I of his *Logic*.

In his *Logic,* Johnson had committed himself to the existence not only of the determinate universals (*red, green,* etc.) but also of the determinables (*colour, shape,* etc.). He further argued that "the grounds for grouping determinates under one and the same determinable is not any partial agreement that could be revealed by analysis" (1921, p. 176). *Red* is not grouped with *green, blue,* etc. because there is a

common character belonging to them; we are unable to discern in coloured things a generic character that makes them all alike alongside a separate package of differentia that make them different. Rather, they are grouped together, Johnson maintained, because of a "unique and special kind of difference that subsists between the several determinates under the same determinable". Roughly speaking, Johnson's idea was that determinates fall under the same determinable because they form a family united by their mutual incompatibility, i.e. united by the fact that they cannot simultaneously qualify the same particular.

Stout agreed with Johnson that *red, green,* etc. are incapable of being analysed as the result of adding differentia to a common genus, *colour:* "I find this a frightfully difficult view to understand. If it is right, we ought to be able to discern in a square shape two qualities, squareness and shape. Speaking for myself, I can do nothing of the sort" (1923, p. 118). He also agreed that determinates under the same determinable form a family. He only disagreed with Johnson about the exact character of the relation that unites them. For Stout the relation also involves "a peculiar kind of resemblance": *red* and *green* are not only incompatible but are also alike, *viz*. with respect to being colours. Stout summed all this up using Cook Wilson's dictum: "square shape is not squareness plus shape; squareness itself is a special way of being a shape" (Stout 1921, p. 398).

10.2.8 Stout's Coup de Grâce

Having spelt out the large measure of agreement between them, Stout proceeded to deliver what he conceived to be his coup de grâce: "Mr. Johnson's view is not really self-consistent" (1921, p. 399). The problem that Stout thought he had identified was that recognition of the unique character of the determinate–determinable structure cannot be consistently combined with realism about determinates and determinables. Suppose that "colour" as well as "red" is a singular term that stands for a universal. Then what can we mean by saying that red is a colour? Stout thinks there are only two analyses available to a realist like Johnson: either (1) that the universal *red* is identical with the universal *colour* or (2) that *red* is part identical with *colour*. The former is untenable because it is also true to say that green is a colour; so, by parity of reasoning, *green* is identical with *colour* too. But then the absurdity follows from (1) that *red* is identical with *green*. The latter analysis is untenable too because, as Johnson has shown, *red* is not a complex that can be analysed into a generic quality that is equality present in the other colours plus some determining quality which distinguishes it from *green* and *blue*.

Stout concludes that we must "give up the initial assumption that redness and colour are singular terms". We can only avoid the difficulty Johnson encounters if we understand that they are really "general terms" that stand for more or less inclusive distributive unities, i.e. pluralities of particular characters. Thus "red" is a general term that denotes the plurality of particular reds, "colour" a general term that denotes the plurality that includes not only the particular reds but also the

particular greens, blues, etc. This avoids Johnson's difficulty because "colour" is not conceived as a standing for a single, though indeterminate, quality: "Colour in general is nothing but the distributive unity of its specific sub-kinds, just as those are ultimately the distributive unity of their particular instances. To be a particular colour is to be a particular example *either* of this, that or the other special kind of colour" (1921, p. 399; 1923, p. 118).[6]

Despite the significance that Stout assigned to it, realists are unlikely to be impressed by this particular argument that Stout gave. They may deny, as Moore subsequently did, the existence of generic universals whilst continuing to affirm the reality of specific ones (see, for example, Knight 1936, p. 58). Or, to avoid Stout's *reductio ad absurdum,* they may attribute to the statement that red is a colour a more sophisticated logical form than (1) identity or (2) part-identity.

Nonetheless, what Stout's argument does reveal is the depth of his commitment to treating "red", "colour", etc. as general rather than singular terms. It is because he took (e.g.) "colour" to stand for many things—many particular characteristics rather than a single quality—that Stout was able to avoid the difficulties that he took to confront realists when they endeavour to explain the peculiar relationship between determinates and determinable that Johnson had identified. Hence Stout's explicit pronouncement: "Abstract nouns are, on my view, not singular, but general terms. Shape, for example, stands for "all shapes as such," and squareness stands for all square shapes as such" (1921, p. 386). Since they are general, "shape" and "colour" are not singular terms that stand for wholes either. Of course, this does not prevent Stout talking as if shape or colour, more generally universals, were single things, so long as it is understood that to do so is merely to talk in an abbreviated manner about particular shapes, colours, etc.: "Analogous abbreviations are very common: for example, we say that the same thing has occurred before, though we know that the same event cannot occur twice. What we mean is that a very similar event has occurred before. In like manner, when we say that two men have the same thought, we do not mean that the thought of one is identical with the thought of the other. We only mean that they are thinking of the same thing" (1936, p. 4).

10.3 Against Bare Particulars

I have cast Stout in the role of seeking to overcome the untenable dualism, as he saw it, of Russell's philosophy—of Lockean substrata on the one hand and self-subsistent universals on the other. He sought to do so by conceiving of the world as exhausted by pluralities of particular characteristics unified along a variety of dimensions, concrete and distributive. He offered two arguments in favour of adopting this extraordinary world hypothesis. The first, targeted at abstract particulars, is

[6] This is essentially the view of determinates and determinables advanced by Campbell (1990, p. 83), although his analysis takes resemblance rather than distributive unity as primitive.

metaphysical but McTaggart showed to falter; but the second, that is near enough transcendental, is load bearing.

Stout disfavoured bare particulars (*à la russellienne*) because he could make no sense of something the entire nature of which is exhausted by it being the subject of attributes which themselves are conceived as entirely distinct from it: "How can the whole being of anything consist in its being related to something else? There must be an answer to the question, 'What is it that is so related?'" (Stout 1914–15, p. 350; Stout 1940, p. 117; Stout 1952, p. 73). Since there can be no satisfactory answer to this question—bare particulars are bare by definition—Stout refused to admit them.

McTaggart took up their defence in his *Nature of Existence* (1921, § 69). McTaggart granted Stout's assumption that a particular (substance) cannot be a mere node in a network of relations to other things, *viz*. its attributes. But he denied that a particular conceived as the bearer of attributes distinct from it, is merely a node in a network. Suppose Smith is happy. Then it is a fact that Smith is characterised by happiness—the particular is indeed related to its attributes. But this relational fact is not fundamental. It is derived from a more basic fact that is not relational in form, *viz*. that Smith is happy; Smith is only characterised by happiness because he is happy. This gives McTaggart a ready reply to Stout's question: "*What* is it that stands to happiness in the relation of being characterised?" McTaggart's answer: "Smith, who is happy, he is also a man, and so on".

Stout was unmoved by this defence. Even what McTaggart calls the primary fact—that Smith is happy—contains two quite distinct existences, the particular on the one hand and the character predicable of it on the other. But, Stout insists, "two distinct existences within a complex can only be connected by a relation" (1921, p. 394). If so, then even the fact that Smith is happy is a relational fact. But Stout (especially) should not have been satisfied with this line of response. It was integral to his own account of how things integrate together—along a whole variety of dimensions—that a plurality of diverse constituents may be united without there being a relation that connects them together: "the unity of a complex as a whole ought not to be confused with relations between terms" (1921, p. 388). As we have already established, it was by means of such a distinction that Stout hoped, *inter alia,* to evade Bradley's regress.

Even though Stout's rejoinder to McTaggart is unsatisfactory, it is not difficult to get into a frame of mind where the mere fact that a (bare) particular and its characters are distinct existences is already a troubling enough feature—never mind whether there is a relation connecting them. A bare particular is just another element of a complex juxtaposed with others. There is no saying what it is except saying what complexes it contributes towards—never mind whether these are relational complexes or not. Because it is distinct from the characters with which it makes common cause, it cannot be a "false abstraction" to consider the particular by itself. And so considered there is no satisfactory answer concerning a bare particular to Stout's question: "What is it?" And when we have allowed ourselves to adopt this mind-set it is not so difficult to feel the attraction of Stout's favoured ontology of particular characters. Particular characters are not the union, relational or otherwise, of a particular on the one hand, and, on the other, an attribute quite distinct from it.

Whilst we may be able to conceive of a particular character *qua* particular this really is a false abstraction: there is really nothing bare about it, it is a character, albeit a particular one; there is no separate "it", something that is not a character, to pick out.

10.4 Against Universals: Initial Pass

If this attempt at persuasion makes us more sympathetic to Stout's project, it still leaves us wanting a real argument for affirming his world hypothesis. If I am right then Stout does provide such an argument, this one targeted against the other side of Russell's dualism: universals.

Stout was impressed by a distinctive feature of the epistemology of numerical diversity, *viz*. that we are able to appreciate at a glance that two things are numerically different even though we often are not able to isolate any respect in which one of them is qualitatively unlike the other. Stout's position is that we could not appreciate diversity this way, not see (e.g.) that the two billiard balls are numerically different at a glance, if their characters were universals. Indeed we could not see this unless we apprehended that the roundness, smoothness and whiteness of the one ball are numerically diverse from the roundness, smoothness and whiteness of the other; their characters must be particulars. Stout makes two passes over this material to try and get what he takes to be a single line of thought across; but really he offers two distinct lines of reflection.

The first line of reflection, which has attracted the most attention from commentators, relies upon the metaphysical axiom that nothing can be present in different places without itself being divided (see Aaron 1939, pp. 177–178; Segelberg 1947, pp. 152–153, Jones 1949, pp. 159–60; Seargent 1985, pp. 87–88; van der Schaar 1991, pp. 130–131). It follows straightaway that one and the same character cannot be wholly present in a multitude of different places and times. Since (e.g.) the roundness of one ball is present in a different place from the roundness of the other, it follows that the characters of these concrete things must be different too, i.e. different particulars rather than a common universal (1921, p. 390).

Certainly, Stout himself affirms in his dispute in Durham with Moore that this metaphysical axiom is key to his case against universals: "All that I require for my argument is the proposition that nothing in its entirety can be locally or otherwise separate from itself in its entirety" (Stout 1923, p. 120). And certainly this axiom continued to inform Stout's subsequent campaign against universals: "Now I cannot understand how a universal, however specific, can be thus divided into separate bits. I cannot see how a universal can be beside itself, or at a distance from itself" (1936, p. 11). But it is no less certain Stout is begging the question when he wields this axiom. It is plausible that a particular cannot be wholly present in a multitude of different places at a time.[7] But universals are supposed to be a different kind of beast

[7] Although even the principle that that a particular cannot be wholly present in different places at the same time is open to question. What about the possibility of extended atoms, bi-located saints, Dr. Who meeting himself and so on? (see MacBride 1998, pp. 220–7).

altogether, the things responsible for our being able to truly say that particulars in different places have the very same characteristics. So the upholder of universals will be unmoved by what Stout says. Certainly, this was one of the reasons that Moore thought Stout's argument for particular characteristics begged the question (see Moore 1923, pp. 105–107).

10.4.1 Against Universals: Second Pass

The second line of reflection that Stout assays indicates that he had no need to rely upon so strong an assumption to establish his case. Indeed, it seems that Stout mistook a conclusion for a premise when he made his initial pass over this material. What primarily exercises Stout this time around is the thought that the epistemic techniques we routinely rely upon to distinguish numerically diverse things would simply lack credibility in an environment where the characteristics of concrete things are universals. Stout's starting point was that only the characters of a thing are perceptually given to us, rather than the substrata clothed by them: "There can be no knowledge of it which is not knowledge of its characters" (1921, p. 391; 1923, pp. 122–3). Stout surmised from this that the only way to discern that things are numerically diverse is to discern a difference in their characters. Now it is a feature of our epistemic practice that we routinely distinguish between concrete things even in circumstances where we can perceive no *qualitative* difference between them; for example, when we distinguish between the different parts of a sheet of white paper. But if the characters of things were universals we could have no credible grounds for regarding such things to be numerically diverse. Why? Because the characters we perceived them to exhibit would be exactly the same universals. If, however, the characters of things are themselves particulars, then attending to them is already to have appreciated their diversity.

This invites the rejoinder that it is the awareness of *relational* differences that enables us to distinguish things even in circumstances when we can perceive no qualitative difference between them; for example, when we are aware that the left-hand part of paper is numerically diverse from the right-hand part because even though they are qualitatively indistinguishable, the former is closer to the inkpot whereas the latter is closer to the penholder. Stout dismisses this rejoinder: "Nor can we say that each part is distinguishable by its distinctive relations to other parts. For in order that one particular may be known as related in the required way to other particulars, it is a logical precondition that it shall itself be known as one particular amongst others" (1921, p. 391).

Unfortunately, Stout does not unpack his reasoning for saying so. But here is an argument for agreeing with him. If all we know is that something x bears R to z, and something y bears S to w, then we are not entitled to draw the conclusion that $x \neq y$. To be entitled to that conclusion, the further premise would need to be added that x does not bear S to w or that y does not bear R to z—i.e. something is true of one that is not true of the other. But we cannot be entitled to this premise unless x and y have

already been distinguished by us—otherwise we would not be entitled to affirm that *x,* so to speak, slots into a truth *p* whereas *y* does not. So it is only because we already apprehend their diversity that we are able to apprehend the relational differences of concrete things. And we are able to do so—even in circumstances where we cannot perceive a qualitative difference between them—because we already apprehend the numerical diversity of their particular qualitative characteristics.

So interpreted, Stout's case for tropes is near enough transcendental, *viz*. that it is a condition of perceptual experience delivering knowledge of the numerical diversity of concrete things that the characteristics of concrete things are particular.[8] This means that Stout is not just assuming at the outset—as more recent trope activists have done—the metaphysical axiom that nothing can be in many places at once without being divided (see, for example, Campbell 1990, p. 12). Stout endeavours to put the case for tropes upon a far firmer footing, providing a deduction of the principle that the characters of concrete things are particular from the assumption that the informational packages that perceptual experience supplies are exclusively about the characters of concrete things.

10.4.2 Armstrong's Metaphysical Interpretation Dismissed

It will help us fix upon the distinctive features of this interpretation of Stout's case if we place it alongside another more familiar interpretation due to Armstrong—which we can now see to be far wide of the mark (see Armstrong 1978, pp. 81–82). According to Armstrong, Stout relies upon two metaphysical premises. (1) A concrete thing is nothing but a bundle of its properties. (2) Two concrete things can resemble exactly. Stout is committed to (1) because of his prior rejection of the idea of a bare particular. Stout is committed to (2) because he recognised that it is not a necessary truth that numerically diverse things differ in some of their non-relational properties. But these two premises cannot be consistently combined with (3) the characteristics of concrete things are universals. Suppose two concrete things exactly resemble one another. If (3) is correct, then they will have exactly the same characteristics. But if (1) is correct, then they cannot be two because they are the very same bundle of characteristics, but must be one, which is contrary to (2). Since (1) and (2) are already mandated for him, Stout, on this interpretation, concludes that (3) cannot be correct.

It is true that Stout did endorse a version of the bundle theory—he held that a concrete thing is the "peculiar unity" of the particular characteristics truly predicable of it. And Stout certainly did affirm the possibility of exactly resembling concrete things: "Two drops of water, for instance, may conceivably be exactly alike except that they must have different positions in space, and whatever further differences

[8] Towards the end of his life, Stout was to remark in a paper that grew out of correspondence with Kemp Smith: "If distributive unity is a category, it ought to be possible to give a 'transcendental proof' of its formula, analogous to those given by Kant for causality and the other so-called principles of judgement" (1947, p. 16).

this must involve" (1952, pp. 77–8). But Armstrong's interpretation goes awry because Stout relied upon neither (1) nor (2) in his argument that (3) is mistaken.[9]

The premise to which Stout explicitly appeals to start his argument is "that the substance is nothing *apart from* its qualities" (1921, p. 390). Admittedly, taken out of context, this may give the impression that Stout is assuming a version of (1), that a concrete thing is nothing but a bundle of its qualities. But this is not how Stout intended his premise to be taken. He meant to put forward a proposition that is "almost universally admitted" so that even his adversaries could agree to it. In fact, Stout self-consciously drew the formulation of the premise from McTaggart's *Nature of Existence*. In this work, McTaggart rejected any version of the bundle theory but continued to maintain "It is, of course, quite true that a substance is nothing apart from its qualities" (1921, § 68). How was it consistent for McTaggart to hold these commitments together? Because he did not mean by the phrase "nothing apart" that a substance is *nothing but* its qualities. He meant only that a substance *without* its qualities is not something of which we can coherently conceive.

If not (1), then how did either Stout intend his premise to be understood? He intended to be understood in just that sense that McTaggart did, *viz*. that we cannot form an intelligible conception of a particular in abstraction from its qualities: "If we were to try to form a conception of a substance which had no qualities the undertaking would be as hopeless as an attempt to form a conception of a triangle without sides" (McTaggart 1921, § 68). This weaker premise is all that Stout needs to derive the *epistemological* lemma that shapes his subsequent argument but is absent from Armstrong's reconstruction: "If substance is nothing apart from its qualities, to know the substance without knowing its qualities is to know nothing" (Stout 1921, p. 391).

Stout did not employ (2) as a premise of his argument either. In fact, he begins by making a concessive nod towards McTaggart's contention that there cannot "be two things which are exactly similar" (1921, § 94). About this claim, the negation of (2), Stout declares, "In this he may be right" (1921, p. 390). Stout's argument then proceeds without making any appeal to actual or possible examples of diverse things that are exactly similar. Instead, he appeals to the *epistemic* fact that we are able to discern numerical diversity even in circumstances where we are unable to discern qualitative differences. Recall Stout's discussion of what he is able to appreciate from just looking at a sheet of white paper: "I am able to discern the several parts of the paper without discerning qualitative unlikeness between each part and every one of the others" (1921, p. 391). To say that he can discern numerical diversity between the parts of the paper without discerning any qualitative difference between them does not require Stout to presuppose that there are no qualitative differences between the parts, i.e. the parts of the paper actually exactly resemble one another. He need only presuppose that if there are any, he cannot see them. And this is all that

[9] The argument that Armstrong attributes to Stout is really one to be found in Russell (1911–12) who had filched it from Moore (1900–01). Stout was doubtless aware of Russell's argument; he alludes to it in his Gifford lectures (1952, p. 78). But although there is a family resemblance between them, Stout's argument, as will become apparent, exhibits key differences. See Hochberg (1978, pp. 129–33) for discussion of Russell's argument.

Stout needs to run his argument, *viz*. that it would not be possible for us to discern numerical diversity without discerning qualitative difference—our epistemic practices would not survive—in an environment where only the universal characteristics of concrete things were given to us.

10.4.3 Stout's Rejection of Russell's Distinction between "Knowledge of Things" and "Knowledge of Truths"

We can gain further insight into the epistemic character of Stout's case for tropes by attending to the rejoinder Stout himself took most seriously, *viz*. that, despite what he had said, "there can be knowledge of a substance which is not knowledge of its characters" (1921, p. 391). In *Problems of Philosophy,* Russell had drawn a distinction between "knowledge of things" and "knowledge of truths"—roughly, Russell suggested, a distinction marked by "savoir" and "connaître" in French and "wissen" and "kennen" in German (1912, p. 23). Russell identified knowledge of things, when it is of the kind he called "knowledge by acquaintance", as essentially simpler than, and logically independent of, knowledge of truths. Whereas the latter presupposes the capacity upon the part of a knowing subject to form a discursive judgement about a thing—that it is thus-and-so—the former is immediate: "I say that I am *acquainted* with an object when I have a direct cognitive relation to that object, i.e. when I am directly aware of the object itself. When I speak of a cognitive relation here, I do not mean the sort of relation which constitutes judgement" (Russell 1910–11, p. 108). If Russell is right, then there can be knowledge of a substance—knowledge of a thing—that is not knowledge of its characters—knowledge of truths about it. So if the stark contrasts of Russell's nascent epistemology are forced upon us, then Stout's transcendental argument for tropes collapses.

This explains why it was a vital task for Stout, when constructing his case for tropes, to overcome Russell's antithesis between knowledge of things and knowledge of truths.[10] His strategy was to argue that immediate knowledge of a thing that is not mediated by knowledge of truths about it is a false ideal because we cannot know anything "if it is supposed that we know absolutely nothing about it" (1921, p. 392), "mere existential presence is not knowledge at all" (1952, p. 72). Stout presupposed that in order to know a thing we have to be capable of intellectually detaching it from the background against which it is presented. To do so, requires us to appreciate *what* it is, in order to tell where its boundaries lie. But thing knowledge, because it is not mediated by knowledge of truths about a thing, cannot supply the sortal information we need to perform such an act of intellectual detachment: "If we inquire what in mere acquaintance we are acquainted with, mere acquaintance itself, being blind and dumb, can supply no answer" (1921, p. 393).

To explain how it is possible to intellectually carve a thing out, Stout appeals to an epistemic version of the Context Principle. It is only because we are already

[10] Stout consequently devoted an appendix of his "Russell's theory of judgement" and chapter IV of his Gifford Lectures to undermining the various contrasts of Russell's epistemology (1914–15, 345–52; 1952, 53–76).

aware of a thing *as* a thing of a given sort that it is possible for us to make it an object of our attention. So the answer to the question "what in mere acquaintance are we acquainted with?" must "be sought in analytic judgements which involve knowledge about".[11]

Stout identified perceptual judgements as the analytic, i.e. discursive judgements that are responsible for enabling us to detach a thing from the environmental backdrop against which it is presented. But "these judgements never reveal a mere thing apart from its characters, but always the thing as in some way characterised". Because there is no knowledge of a thing that is not mediated by knowledge of truths about it, Stout concluded that the epistemic principle holds good—upon which his case for trope depends—that there is no knowledge of a substance that is not knowledge of its characters.

Of course whether Stout's transcendental argument for tropes succeeds, or not, depends upon whether, as he supposes, the informational packages supplied by perceptual experience are solely about characters of things or, rather, about things-having-characters or things-lying-in-relations.

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[11] Compare the semantic version of the Context Principle that Dummett sketches in his 1973, pp. 496–8.

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Chapter 11
Two Problems for Resemblance Nominalism

Andrea C. Bottani

Abstract According to the resemblance nominalism, properties depend on primitive resemblance relations among particulars, while there are neither universals nor tropes. Rodriguez-Pereyra (Resemblance nominalism. A solution to the problem of universals, 2002) contains a systematic formulation and defence of a version of resemblance nominalism according to which properties exist, conceived of as maximal classes of exactly precisely resembling particulars. In this chapter, I raise a couple of objections against Rodriguez-Pereyra's version of resemblance nominalism. First, I argue that Rodriguez-Pereyra's solution to the so-called imperfect community difficulty is untenable. Second, I argue that Rodriguez-Pereyra's idea that sparse properties are bound to be lowest determinates, while determinable properties of any degree are to be treated as (infinite) disjunctions of determinates, is liable to undermine the whole approach.

Keywords Resemblance nominalism · Class nominalism · Determinates versus determinables · Exact resemblance · Sparse versus abundant properties

11.1 Nominalisms

Just as 'being' according to Aristotle, 'nominalism' can be said in many ways, being currently used to refer to a number of non-equivalent theses, each denying the existence of entities of a certain sort. In a Quinean largely shared sense, nominalism is the thesis that abstract entities do not exist. In other senses, some of which also are broadly shared, nominalism is the thesis that universals do not exist; the thesis that neither universals nor tropes exist; the thesis that properties do not exist. These theses seem to be independent, at least to some degree: some ontologies incorporate all of them, some none, some just one and some more than one but not all. This makes the taxonomy of nominalisms very complex. Armstrong (1978)

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distinguishes six varieties of nominalism according to which neither universals nor tropes exist, called 'ostrich nominalism', 'predicate nominalism', 'concept nominalism', 'mereological nominalism', 'class nominalism' and 'resemblance nominalism', which Armstrong criticizes but considers superior to any other version.

According to resemblance nominalism, properties depend on primitive resemblance relations among particulars, while there are neither universals nor tropes. Rodriguez-Pereyra (2002) contains a systematic formulation and defence of a version of resemblance nominalism according to which properties exist, conceived of as maximal classes of precisely resembling particulars. A precise resemblance is one that two particulars can bear to each other just in case there is some 'lowest-determinate' property—for example, being of an absolutely precise nuance of red—that both have just in virtue of precisely resembling certain particulars (so that chromatic resemblance can only be chromatic indiscernibility). This is not the only possible variety of resemblance nominalism. Another variety of resemblance nominalism, that is sketched in Price (1953), treats properties as maximal classes of particulars closely resembling a small number of paradigms, where close resemblance in colour does not require chromatic indiscernibility (and so, there need to be no 'lowest-determinate' property that resembling particulars share).

In this chapter, I shall not consider the latter variety of resemblance nominalism, which Rodriguez-Pereyra convincingly criticizes (see Rodriguez-Pereyra 2002, pp. 124–141), and which even Price does not seem to have either accepted or rejected. Instead, I shall raise a couple of objections against Rodriguez-Pereyra's version of resemblance nominalism. First, I shall argue that Rodriguez-Pereyra's solution to the so-called imperfect community difficulty (Goodman 1966, pp. 162–164) is untenable. Second, I shall argue that Rodriguez-Pereyra's idea that sparse properties are bound to be lowest determinates, while determinable properties of any degree are to be treated as (infinite) disjunctions of determinates, is liable to undermine the whole approach.

11.2 Resemblance, Classes and Imperfect Communities

In Rodriguez-Pereyra's version, resemblance nominalism 'says, roughly, that for a particular to have a property *F* is for it to resemble all the *F*-particulars' (Rodriguez-Pereyra 2002, p. 25). Since an *F*-particular is just something that has the property *F,* this idea of what it is for a particular to have the property *F* may sound plainly circular: Having F merely amounts to resembling all the things that have *F,* which can hardly be seen as an explanation of what it is to have *F*. The circularity, however, vanishes if one formulates the general idea in some less rough way. One way is as follows. Whenever there are *n* things, such that each of them resembles all of them and nothing else does, there must be exactly one sparse, lowest determinate, non-disjunctive property *F* that all and only those things share. And their sharing *F* is nothing over and above their resembling each other, so that having *F* simply amounts to resembling all those things. If one is not sceptical about classes, one can

easily identify *F* with the class of those things, the resemblance to which amounts to having *F* (that is, with the class of things that have *F*).

This explains why there are a number of difficulties that resemblance nominalism shares with class nominalism. One has to do with coextensive properties.[1] If *F* and *G* are had exactly by the same things, having *F* and having *G* consist in resembling the same things, which entails that *F* and *G* cannot be different. But there seems to be no reason to treat properties like *having a heart* and *having kidneys* as the same property, despite the fact that all the organisms with a heart also have kidneys and vice versa. The coextension difficulty can be brought under control by embracing modal realism (Rodriguez-Pereyra 2002, p. 99). If what makes a particular to have a property *F* is that it resembles all *possible F*-particulars, then *F* and *G* can be treated as different even in case they are coextensive in the actual world. And the usual rejoinder according to which this does not allow one to treat necessarily coextensive properties as different can be blocked by claiming that every apparent example of necessarily coextensive properties 'is in fact just a case of semantically different predicates applying in virtue of one and the same property or relation' (Rodriguez-Pereyra 2002, p. 100).

The coextension difficulty challenges the idea that whenever *n* particulars are such that each of them resembles all of them and nothing else does, there is at most one (sparse, lowest determinate) property that they share. What is known as 'the imperfect community difficulty' challenges the idea that, whenever there are *n* such particulars, there is at least one property that they share. The difficulty was first named and described by Nelson Goodman in *The Structure of Appearance*. For the sake of simplicity, suppose that there are three things *a*, *b* and *c* such that *a* is red and hot but not soft, *b* is red and soft but not hot and *c* is soft and hot but not red. Since *a* and *b* share the property of being red, *a* and *c* share the property of being hot and *b* and *c* share the property of being soft, surely *a*, *b* and *c* are such that each of them resembles all of them. Now, suppose that nothing else resembles both *a*, *b* and *c* (only *a*, *b* and *c* do). In such a case, either there is a sparse, lowest-determinate property that *a*, *b* and *c* share or resemblance nominalism is false. But the only property that *a*, *b* and *c* seem to share is the disjunctive property of being red, hot or soft—which is abundant, non-sparse. Therefore, resemblance nominalism is false: Sometimes *n* things are such that each of them resembles all of them and nothing else does, but there is no sparse, lowest-determinate property that all and only those things share.

Rodriguez-Pereyra (2002) attempts to avoid the difficulty by making the relation between resemblance and having a property more complicated. According to this refined version of resemblance nominalism, in order for some things to be the only things that share a sparse, lowest-determinate property, it is no longer sufficient that each of them resembles all of them and nothing else does, it is also required that each couple of them resembles all couples of them and that each couple of couples of them resembles all couples of couples of them, and so on. According to

[1] Leaving aside coextensive properties, both class nominalism and resemblance nominalism have been thought to be committed to an infinite regress and to be unable to give a correct account of relations (see Armstrong 1978, 1989).

Rodriguez-Pereyra, there is a sense in which, even if *a*, *b* and *c* are such that each of them resembles all of them, their couples do not. This sense, however, is not immediately transparent. For there is an obvious sense in which all the couples of *a, b* and *c* are such that each of them does resemble all of them. First, they all are couples. Second, they are resembling couples, given that the elements of each of them resemble the elements of all of them. Third, no other couple can be such that its elements resemble the elements of all of them, since the elements of all of them are just *a, b* and *c,* and by hypothesis, nothing else except *a, b* and *c* resembles all of *a, b* and *c*. So, to conclude with, the couples of *a*, *b* and *c* are such that each of them resembles all of them and nothing else does. But, nonetheless, there seems to be no property that *a, b* and *c* share.

What Rodriguez-Pereyra has in mind is that, in order for *a, b* and *c* to share any property, all the couples of *a, b* and *c* (and their couples and the couples of their couples and so on) must not merely resemble but instead resemble in a specific way. And two couples resemble in this specific way if and only if the elements of one couple resemble each other in the same way as the elements of the other couple resemble each other. This is not the case, for example, with the couples $<a, b>$ and $<b, c>$, since the elements of the first couple resemble each other inasmuch as they are both red, while the elements of the second couple resemble each other inasmuch as they are both soft.

Less roughly, the account runs as follows: If a particular is red, say that it is red^0. And say that a couple $<x, y>$ is red^n ($n \geq 1$) just in case both x and y are red^{n-1} so that a couple of red particulars is red^1, a couple of couples of red particulars is red^2 and so on, along all the orders of an ascending hierarchy. The same can be repeated for any sparse property of x different from *being red* (it can easily be seen, then, that every *n*th-order couple inherits its properties of *n*th order from the properties of $(n-1)$th order of its elements). Consider now a set α^0 of particulars, and the set α^1 of all their ordered couples, and the set α^2 of all the ordered couples of those ordered couples and so on. The elements of α^0 share a sparse property just in case they resemble in the required way, and they resemble in the required way if and only if, for any two of them, there is a property of 0 order that they share and, for any two elements of α^1, there is a property of first order that they share, and so on. In symbols,

$$\text{D)} \quad (n)(x)(y)(x \in \alpha^n \wedge y \in \alpha^n) \rightarrow f(x) \cap f(y) \neq \varnothing,$$

where $f(x) \cap f(y)$ are the properties of *n*th order that both x and y have.[2] If α^0 satisfies D), its elements share a sparse property P^0. If, in addition, α^0 is a proper subset of no set that satisfies D), then α^0 can be treated as the extension of P^0, and having P^0 consists in resembling all the α^0 particulars.

If resemblance nominalism is anything, it is the idea that having a property is resembling certain things. The idea must be implemented by specifying what things something must resemble in order to have a property. But the specification can-

[2] The same can be repeated, mutatis mutandis for polyadic properties. In such a case, particulars are *n*-tuples of individuals, couples of first order are couples of *n*-tuples and so on.

not be given in terms of what properties these things must have. However plainly true, the mere idea that having a property consists in resembling all the things that have that property could hardly be named a 'resemblance theory' of having a property—just as the idea that having a size consists in being as big as anything that has the same size can hardly be named a 'resemblance theory' of having a size. (I am not suggesting that the idea is a truism. It is far from banal that having a property *consists in*—and not merely entails or presupposes—resembling something; but we do not have a resemblance theory of having a property unless we say what it is that something must resemble in order to have a property. And this cannot be specified in terms of properties, on pain of circularity.) If one says that having a property consists in being one of *n* things such that each of them resembles all of them and nothing else does, the explanation is just in terms of quantification and resemblance, and not in terms of what properties those *n* things have. But the explanation faces the imperfect community difficulty, so a new explanation must be offered that is immune to the difficulty. Again, the new explanation should avoid specifying what things something must resemble in order to have a property in terms of what properties those things have. But it is not clear that Rodriguez-Pereyra's refined explanation avoids doing so.

According to the new explanation, the particulars *a, b* and *c* mentioned above do not share any property even if each of them resembles all of them because their couples—for example, <*a, b*> and <*b, c*>—fail to resemble in the required way. And they fail to do so inasmuch as there is no sparse property that both the elements of one couple and those of the other share, which is the condition in terms of which the required kind of resemblance between couples of particulars is defined. But then, as one can easily see, the required resemblance of all the couples of *a, b* and *c* (and the couples of those couples and so on) is defined in terms of the existence of some property that all of *a, b* and *c* share. At this point, however, one can easily feel perplexed. Since we see that *n* things can be such that each of them resembles all of them even if there is no property that they share, we must find another way of stating in terms of resemblance when it is that *n* things share a property. But, if the idea is that in order to share a property, *n* things must be such that (their couples are related in such a way that) there is a property that each of these things shares, this may seem to be more a roundabout statement of the mere platitude that *n* things share a property just in case they do than a way of implementing resemblance nominalism.

One can invite us not to confuse the order of justification with the order of ontological dependence. If one says that *n* things are such that they resemble in a certain way if and only if there is a property that they share, the order of justification goes from right to left, but the order of ontological dependence follows the reverse route: It is by virtue of a certain resemblance between <*a, b*>, <*b, c*> and <*a, c*> that there is a property that *a, b* and *c* share, but it is by virtue of the existence of a property that *a, b* and *c* share that we are justified in saying that <*a, b*>, <*b, c*> and <*a, c*> resemble in that way. The justification is given by quantifying over properties, but everything we say in terms of properties is made true by nothing other than particulars and resemblance.

This reply simply misses the point. The point is that one cannot define a certain kind of resemblance in terms of having a property and then using this very kind of resemblance as a necessary condition for having a property. The reason why one cannot is not that doing so amounts to saying something false, but that it gives no information. All that is said is that having a property consists in resembling something, but the only answer that is given to the question 'Resembling what'? is 'resembling whatever has that property', which of course is completely uninformative. The same circularity also affects Rodriguez-Pereyra's solution of the so-called companion difficulty, which is that some properties can have extensions that are a proper subclass of the other. The reason is that Rodriguez Pereyra's solution of the companion difficulty is built on his solution of the imperfect community difficulty and inherits its problems (see Rodriguez-Pereyra 2002, Chap. 10).

11.3 Determinates, Plurality and Perception

According to Rodriguez-Pereyra's version of resemblance nominalism, primitive relations of precise resemblance establish lowest determinates that are sparse and can be reconstructed in terms of resemblance classes, while determinables are to be treated as (infinite) disjunctions of determinates, and so as abundant. This idea yields a number of difficulties.

Contrary to determinables of any degree, lowest-determinate properties might well be instantiated by just one actual entity. It might well turn out, for example, that only a certain leaf (or a certain tip of a certain leaf) and nothing else is actually that precise nuance of green; and it might turn out that only a certain actual spoon (or the handle of a certain spoon) and nothing else is actually that precise temperature (after all, temperatures and colours are as many as real numbers and so innumerable, which means that between two lowest determinates, however proximate they might be, there are an infinite number of intermediate lowest determinates).[3] In such a case, no two things in the actual world would share any property. Since nothing outside the actual world is empirically accessible to us, for any sparse, lowest-determinate property, there would be just one empirically detectable thing that has it.

By multiplying particulars, it might be suggested that perdurantist theories of persistence reduce this possibility to a minimum. Take a fork and a knife gradually warming from 20 to 30 °C during the same or different intervals. If perdurantism holds, this process requires that, for any lowest-determinate temperature between 20 and 30 °C, there is a temporal slice of a fork and a temporal slice of a knife having exactly that temperature. It may be so, indeed, but it need not be, depending on whether perduring things have instantaneous slices or not, which on its turn seems to depend on whether time is discrete or continuous. For, if time is continuous, any unit of time can be divided into smaller units, which seems to entail that any temporal slice of a persistent thing can be divided into shorter temporal slices. If a gradual

[3] Campbell (1990, p. 13) makes exactly the same point.

process of warming is continuous, no successive temporal slices of a warming thing can be of the same temperature. So, every temporal slice of a warming thing is a sum of shorter temporal slices that are not of the same temperature. So nothing has a lowest-determinate temperature unless it does not change its temperature during some interval (the argument can be replied, mutatis mutandis, for colour and in fact for any determinable).

The moral to be drawn is roughly as follows: If nothing has invariably a lowest-determinate property during some interval, and time is continuous, nothing at all has a lowest-determinate property. If time is continuous, however, and some things have invariably some lowest-determinate properties during some interval, there are still doubts that two different things actually share the same lowest determinate (and even more doubts that, for *any* lowest-determinate property, at least two actual things share it). So, perdurantism is of no help in proving that lowest-determinate properties are ordinarily instantiated by more than one actual thing, unless time is discrete. The possibility that a huge number of sparse properties fail to be true of more than one actual particular may not sound too disturbing, especially if one is ontologically committed to *possibilia*. If sparse properties could be predicated of just one actual thing, however, properties would certainly be divorced from actual generality.

Even if lowest determinates were normally instantiated by more than one actual thing, moreover, those things might easily be too fine-grained to be perceived, discerned and referred to in any way, even with the help of the most precise instruments of measurement (this would be the case if lowest determinates could only be instantiated by temporally flat entities). And even if we could perceive things that have lowest-determinate colours or temperatures, we could not perceive their lowest-determinate colours and temperatures (so, a fortiori, we could not perceive that two or more things have the same lowest-determinate colour or temperature, even if there are any such things). We could not perceive the colour of a ball or the temperature of a fork (nor could we perceive *that* a ball is a certain colour or *that* a fork is a certain temperature), for the power of resolution of our senses—and even of our best instruments of measurement—is certainly insufficient to perceive lowest determinates.

If we are unable to perceive lowest-determinate colours, it is not clear how we could perceive determinables, provided determinables are (infinite) disjunctions of determinates. How can one perceive either John or Jack, if he/she perceives neither John nor Jack? And how can a colour-blind person perceive red or green if he/she perceives neither red nor green? Perhaps, it might be suggested that one can be able to perceive *that* something is red or green while being unable both to perceive *that* something is red and to perceive *that* something is green (in the same way, one can know that something is red or green while knowing neither that it is red nor that it is green). However plausible this may sound, it is far from obvious, especially if one can neither perceive that something is red nor perceive that something is green. To perceive that something is somehow ambiguous between the green and the red, indeed, is not to perceive that something is unambiguously green or unambiguously red, especially if one is invariably unable both to perceive that something is unam-

biguously green and to perceive that something is unambiguously red. And nobody of course has ever perceived that something is of any lowest-determinate nuance of red, green or any other colour (temperature, mass, etc.).

If we are able to perceive that something has a determinable colour (for example, being red) while failing to perceive that it has a lowest-determinate colour, this is probably not by perceiving that it has disjunctively an infinite number of lowest-determinate properties. In this kind of perception, the unperceivables might be given somehow collectively rather than disjunctively. When we perceive an extended place, we do not perceive an infinite disjunction of geometrical invisible points, but rather a bidimensional metrical space whose parts—down to its smallest indivisible parts (geometrical points, if any)—can only be individuated relative to each other. And the extended space itself can only be individuated relative to other places not enclosed in it, but belonging to one and the same larger space. The same may occur, mutatis mutandis, when we perceive a determinable colour.

Given the imperfect power of resolution of our senses and even of our best instruments of measurement, the idea that we cannot perceive that something is *P* unless *P* is a lowest determinate or a disjunction of lowest determinates raises problems for our very possibility to perceive that something is *P*. But resemblance nominalism would have difficulties in explaining how it is that we can perceive that *P* even if our senses had a perfectly adequate power of resolution. If having a lowest-determinate colour consists in resembling all things that are that colour, perceiving that something is that colour amounts to perceiving that it resembles all those things (and that the class of those things satisfies certain conditions of maximality, and that any couple of things of that class resembles any other, and so on: see Rodriguez-Pereyra 2002, Chaps. 9–12). But nobody can perceive that something resembles all the things that are a particular colour unless he/she perceives all those things, which is very difficult in case they are all actual and it is impossible in case some of them are mere *possibilia*.

Rodriguez-Pereyra, who discusses this in connection with his own version of resemblance nominalism, presents the difficulty as a reformulation of an objection moved by Mulligan et al. against both concept nominalism and universalism about properties (Mulligan et al. 1984, p. 306).[4] His defence is as follows:

> In those cases of perception we report by saying that we see the scarletness of the table what we see is that the table is scarlet. And what makes a particular scarlet involves its resembling all other scarlet particulars and more than that […]. But the objection is a *non sequitur*. For, in general, to perceive that something is gold or water one need not and typically does not, perceive that the thing has atomic number 79 or that its molecular composition is H_2O. (Rodriguez-Pereyra 2002, pp. 93–94)

One can deny that seeing the scarletness of a table amounts to seeing that the table is scarlet. But even if one abstains to do so, Rodriguez-Pereyra's defence is not irresistible. For sure, being water consists in being H_2O just as, according to resemblance nominalism, being scarlet consists in resembling all scarlet particulars; and nobody can perceive that something is H_2O, just as nobody can perceive that

[4] In this context, the point of the authors is aimed to argue for the existence of tropes.

something resembles all the scarlet particulars. But there is an important difference. If one perceives that something is water, the content of perception is causally connected to the molecular composition of what one is perceiving while, if one perceives that something is scarlet, the content of perception does not causally depend in any way on whether what is perceived is the only scarlet thing in the universe or is one of many. So the point against resemblance nominalism might be put as follows: If we can sometimes perceive that *x* is *P* but never perceive that *x* is *R,* it can still be the case that being *P* consists in being *R,* provided our perception that *x* is *P* is invariably caused by *x*'s being *R*. But our perception that *x* is scarlet does not seem to be caused in any way by *x*'s resembling all the scarlet particulars, while our perception that *x* is water is necessarily caused by *x*'s being H_2O.

11.4 Determinates, Determinables and Resemblance

According to Rodriguez-Pereyra's version of resemblance nominalism, properties depend on resemblances that are precise—they are resemblances that two particulars can bear to each other just in case there is some 'lowest-determinate' property that both have just in virtue of precisely resembling the same particulars, so that chromatic resemblance, for example, can only be chromatic indiscernibility. Resemblance admits of degrees only inasmuch as two resembling particulars can bear to each other a variable number of precise resemblance relations (they can be indistinguishable in colour, temperature, mass, dimensions, etc). The idea is that precise resemblances between particulars establish lowest determinates, of which highest determinables are (often infinite) disjunctions. Let me say why I do not believe that determinables can be treated as disjunctions of determinates.

The distinction between determinable and determinate was firstly introduced by Johnson (1921) to qualify the relation between properties like being scarlet and being red. The distinction is relative, inasmuch as a property can be both a determinable with respect to one property and a determinate with respect to another (this is the case of being red that is a determinable with respect to being scarlet but a determinate with respect to being coloured). The following four theses are generally assumed:

1. For any determinate property *P,* there is exactly one property *Q* such that (i) *Q* is a determinable with respect to *P* and (ii) there is no property *R* that is a determinable with respect both to *P* and to *Q*. Every determinate, in other words, determines exactly one *highest determinable*.
2. Every determinable *Q* is such that there are a number of properties *P*1, *P*2,…, *Pn* that are determinates with respect to *Q* and are determinables with respect to no property. For any determinable, in other words, there are a number of *lowest determinates*.
3. Lowest determinates under the same determinable are incompatible with each other, just as determinables of the same degree under the same highest determinable.

4. Nothing can have a determinable property without having some of its lowest determinates. So, given 3, nothing can have a determinable property without having at least and at most one of its lowest determinates.

Given that nothing can have a lowest determinate without having its highest determinable, 4 might suggest that highest determinables are (exclusive) disjunctions of their lowest determinates and, more generally, that determinables of degree n are disjunctions of determinates of degree $n-1$. Having a determinable property, thus, amounts to having *exactly* one of its lowest determinates.

Rodriguez-Pereyra, who endorses this account of determinables, believes that it gives us a straightforward solution to a well-known problem—that of explaining in virtue of what the distinction between determinable and determinate is not the same as the distinction between genus and species (see Rodriguez-Pereyra 2002, p. 49). It is a widely shared idea that a species can be defined by *genus* and *differentia specifica,* where the *genus* and the *differentia* are logically independent (for example, 'animal' and 'rational') while a determinate cannot be defined by a conjunction of independent predicates (since 'blue', for example, entails 'coloured').[5] The idea is disputable, since in some of Aristotle's examples (for instance, 'walking animal'), the *differentia* entails the *genus* (see Topics, IV. 6.); and Sanford (1970) has argued that the idea has additional logical difficulties (see also Sanford 2011, pp. 11–13).

Be that as it may, there is an important aspect of the distinction between determinate and determinable that is left unexplained by the idea of a determinable as an exclusive disjunction of determinates. As Johnson (1921) emphasizes, differences between determinates under the same determinable are quantitatively comparable. For example, blue is more different from yellow than yellow is different from orange. In short, determinables have a metric. They are orderings of determinates along one or more dimensions (in case of multidimensional determinables like colour). Besides being necessarily incompatible, different determinates under the same determinable necessarily stay at some distance, rather like points on a line. This fact grounds Johnson's idea of 'adjectival betweenness' (see Johnson 1921, pp. 181–182),[6] a relation that, for example, orange bears to yellow and red. Since distances between determinates under the same determinable are essential to them, one determinate can be individuated in terms of its distance from other determinates under the same determinable (just as 4 pounds can be individuated as the weight that is greater than 3 pounds by as much as 3 pounds is greater than 2 pounds). Starting from two lowest determinates P and Q, whatsoever under the same highest determinable, one can reach any other lowest determinate R under the same determinable, in terms of the proportion between its distance from P (or Q) and the distance between P and Q[7] (perhaps, taking into account irrational numbers, what one can guarantee is at most that *a great number* of determinates under the same determinable can be reached in that way).

In a line, there is more than a disjunction of points (a listing, so to say, of mutually excluding points). There is an overall order in which the points are given collec-

[5] The idea goes back to Searle (1959; see also Searle 1967).

[6] Here, I shall say nothing about adjectival betweenness.

[7] On the idea of a distance in a quality space, see Mulligan (1991).

tively rather than disjunctively. The identity of each particular point is its position in the overall order. How can the order emerge from the disjunction?

Rodriguez-Pereyra says:

> There is indeed a notion of resemblance on which carmine and vermilion particulars, other things being equal, resemble each other more closely than any of them resembles any French blue particular. Such resemblances may be used to account for determinables. But this is not the resemblance with which I am concerned […].

If such resemblances may be used to account for determinables, it is not easy to see how determinables can be treated as exclusive disjunctions of determinates. Some pages later, however, Rodriguez-Pereyra adds that this notion of resemblance 'is the basis of the resemblance between properties' (Rodriguez-Pereyra 2002). If I understand correctly, what Rodriguez-Pereyra means is that, if one says that carmine and vermilion particulars, *ceteris paribus,* resemble each other more closely than any of them resembles any French blue particular, one is speaking of the determinate properties of being carmine, being vermilion and being French blue, and not of any carmine, vermilion and French blue particulars. What one is saying is that the first and the second determinates resemble more closely than either the first or the second resembles the third. When you have a disjunction of determinates, you also have more or less close resemblances between those determinates. In short, you have a determinable.

I have three objections to this. First, I do not see how the (relatively close) resemblance between a scarlet and a vermilion particular should primarily be seen as a (relatively close) resemblance between their properties and only derivatively as a (relatively close) resemblance between the particulars themselves. It is the particulars that primarily resemble! What bizarre variety of nominalism is this, according to which, close resemblances between particulars supervene on close resemblances between properties? Second, no determinate can be given regardless of its position in the overall metric of its highest determinable: Weighing 2 pounds is weighing twice 1 pound. It is hopeless to begin by giving determinates in isolation and then make the global map of the determinable territory simply emerge from them (in the same way, it is hopeless to give points in isolation and then make an extended place emerge from them). Third, according to resemblance nominalism, lowest determinates are maximal classes of resembling particulars. In what sense, if any, can two maximal, mutually exclusive classes resemble each other more closely than any of them resembles a third? I see none, unless what one means is that the particulars belonging to the first class resemble those belonging to the second class more closely than those belonging to either class resemble those belonging to the third.

I conclude that treating properties as maximal classes of *precisely* resembling particulars does not seem to be very promising. Treating properties as maximal classes of particulars *closely* resembling a small number of paradigms, however, does not seem to offer many advantages.[8] If resemblance nominalism has any hope, it is only by devising some other way to construe properties in terms of primitive, more or less close resemblance relations among particulars.

[8] See Price (1953, pp. 21–22), where this kind of resemblance nominalism is sketched. See also Rodriguez-Pereyra (2002, pp. 124–141), where 'aristocratic' resemblance nominalism is convincingly criticized.

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Chapter 12
Counting the Colours

Benjamin Schnieder

Kevin Mulligan has done a great service to the profession of philosophy in Europe. Among other things, he has made Geneva a centre of analytic philosophy, which provided financial and intellectual resources for numerous Ph.D. students over the years. Being one of them, I found that Kevin was an extremely supportive supervisor whose advice proved invaluable to me on many occasions. I owe him a lot. With gratitude and affection, I dedicate this chapter to him.

Abstract The chapter starts with the presentation of a puzzle about how we ordinarily count the colours of an object. Four different solutions are proposed. Two of the proposals actually solve the puzzle, but they differ in what concepts they employ.

Keywords Ontology · Abstract objects · Colours · Identity · Counting

12.1 The Lemon Puzzle

Argle (unpacking what he brought for dinner)[1]:	Look at this beautiful lemon I bought; it's just perfectly coloured, isn't it?
Bargle	Indeed.
Argle	How many colours does it have (I believe that, as the friend of abstract objects you claim to be, you think we can *count* colours)?

[1] For the dialogue, I allowed myself to borrow David Lewis's famous two characters. Since they are known to enjoy disputes about abstract objects, they are natural choices for the above conversation.

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Bargle It is really evenly coloured; one colour, therefore (by the way: I do not comment upon parenthesised remarks).
Argle If I were to ask you what its colour was, what would you say?
Bargle 'Yellow' seems an obvious candidate.
Argle Certainly; but 'lemon-yellow' would also be appropriate?
Bargle Doubtless.
Argle Now, lemon-yellow is a colour, right?
Bargle I cannot but agree.
Argle And yellow?
Bargle A colour too.
Argle Is lemon-yellow identical to yellow?
Bargle Pardon?
Argle Is lemon-yellow the same colour as yellow?
Bargle Well, no, not the same.
Argle Got you.
Bargle Hm?
Argle You agreed that this lemon is yellow, that it is lemon-yellow, that both yellow and lemon-yellow are colours, and that they are not identical. But then, there are two colours you would ascribe to the lemon—contrary to what you said before, when I asked you about the number of its colours.
Bargle That's fishy.
Argle Perhaps it is; but if so, why?

12.2 Really a Puzzle?

Being confronted with Argle's puzzle for the first time, some people seem to have a strong inclination to believe that it is no *genuine* puzzle. I disagree. But one may, of course, quarrel about the standards a genuine puzzle has to meet. So let me briefly lay down a standard on which the Lemon Puzzle *is* a genuine puzzle:

> *Puzzle Standard* If there are a number of sentences, perfectly acceptable on ordinary standards that appear to strictly imply some non-acceptable sentence, we have a puzzle to solve.

Now, let me present the Lemon Puzzle in a concise form. It is constituted by the following six sentences (to stress the fact that it has to deal with some particular lemon—not *the lemon* understood as a kind of fruit—I will give that lemon a name: 'Leroy'):

P.1 Leroy, the lemon, is yellow.
P.2 Leroy, the lemon, is lemon-yellow.
P.3 Yellow is a colour.
P.4 Lemon-yellow is a colour.
P.5 The colour yellow ≠ the colour lemon-yellow.
P.6 Leroy, the lemon, has only one colour.

These sentences are inconsistent. For, P.3, P.4 and P.5 together imply:

$$\text{(i)}\quad \forall x \left(\begin{array}{l} (x \text{ has the colour yellow } \& \ x \text{ has the colour lemon-yellow}) \rightarrow \\ \exists y\, \exists z (y \neq z \ \& \ y \text{ is a colour } \& \ z \text{ is a colour } \ \& \ x \text{ has } y \ \& \ x \text{ has } z) \end{array} \right)$$

But (i) states that anything having the colour yellow and the colour lemon-yellow has *two* colours (after all, quantification plus non-identity equals counting). So (i) together with P.1 and P.2, implies[2]:

(ii) Leroy, the lemon, has two colours.

Together with P.6, (ii) implies a conceptual impossibility:

(iii) Leroy has only one colour and Leroy has two colours.

In fact, (iii) is even *logically* impossible. For, formally rendered (iii) becomes:

$$\begin{array}{ll} \text{(iii*)} & \exists x\, \forall y (x = y \leftrightarrow (y \text{ is a colour } \ \& \ \text{ Leroy has } y)) \ \& \\ & \exists x\, \exists y (x \neq y \ \& \ x \text{ is a colour } \& \ y \text{ is a colour } \ \& \ \text{ Leroy has } x \ \& \ \text{ Leroy has } y), \end{array}$$

which implies the logical falsehood '$\exists x (x \neq x)$'.

Hence, the Lemon Puzzle is not spurious; from the perfectly acceptable sentences P.1 to P.6, we can derive not only some controversial sentence but even a logical falsehood. To get around this result, we cannot merely reassure ourselves that certainly *something* is fishy about the puzzle (of course, something *must* be fishy about it, because contradictions are not true). We have to find the weak link; either one of the sentences P.1 to P.6 has to be denied or a fallacy has to be discovered. I shall present four candidate solutions in what follows. (I will not consider solutions that consist in denying the existence of the colour yellow or the colour lemon-yellow; the puzzle is dedicated to those who—like Bargle—accept such entities and want to cope with them.)

12.3 Solving the Puzzle: Four Proposals

12.3.1 Shades of Colours Versus Colours

Let us first ask: Is there, despite the appearances, a direct problem with one of the sentences P.1 to P.6? As far as I can imagine, the only sentence that some people, as a first reaction, perhaps could want to deny is sentence P.4. After acknowledging

[2] The implication is analytic, but apparently not logical. It is based on two (trivial) principles that I take to be non-controversial:

B.1 $\forall x (x \text{ is yellow} \rightarrow x \text{ has the colour yellow})$

B.2 $\forall x (x \text{ is lemon-yellow} \rightarrow x \text{ has the colour lemon-yellow}).$

the puzzle, one might declare that lemon-yellow is *not* a colour after all, but only a *shade* of a colour. But this manoeuvre seems futile to me; although it is true that we can call lemon-yellow a shade of a colour (in fact, we can call any sample of a colour a shade of a colour), it is *also* correct to call it a colour (any shade of a colour is itself a colour)—saying otherwise means to *remodel* the rules of English in order to circumvent a problem.[3]

But even if we were to make the said distinction, it would only provide a superficial solution to our problem, as it creates a revenge case. A similar puzzle would immediately arise about counting shades of colours. We can ask how many shades of a colour we find exemplified by Leroy and the natural and correct answer will be: one. However, Leroy is not only lemon-yellow but also is a specific variety of lemon-yellow. This variety is a shade of a colour, and it is not identical to the shade lemon-yellow. So there are two shades of a colour to be found at Leroy, and yet we say Leroy has only one such shade. Hence, the current account is unsatisfactory for two reasons: not only does it draw an artificial line between colours and their shades but it also cannot cope with a simple variant of the original puzzle.

So I take it that sentences P.1 to P.6 are as acceptable as they seem to be. To get rid of the Lemon Puzzle, one should therefore try to discover a fallacy in the derivation of the contradiction. I will now develop three accounts that may dissolve the Lemon Puzzle on principled grounds, and not by terminological fiat.

12.3.2 Tropes to the Rescue

Colours seem to be properties, or at least property-like entities.[4] Now, while we sometimes talk about colours as shareable entities (i.e. as universals), it seems we sometimes

[3] In the OED's entry for 'shade', one reads: '**4** a colour, esp. with regard to its depth or as distinguished from one nearly like it'.

[4] Why the caution? Isn't it obvious that colours are properties? Not quite. Admittedly, the classification of colours as properties is very natural. However, there are some peculiarities in how we talk about colours which may at least cast some doubt on that classification.

Let me explain: In order to refer to colours, we typically use colour adjectives as substantives. But there are also two other classes of designators related to colour adjectives: First, there are derived nouns with the suffix '-ness'—'redness', 'yellowness', etc., and second, there are gerundive constructions such as 'the property of being red', 'the attribute of being yellow', etc. The latter obviously denote properties—for sure, the property of being red is a property. (I ignore Frege's worries about the concept *horse* here, as I regard them as confused and only indicative of problems within his own theory; see Haverkamp 2011.) Presumably, terms such as 'redness' also denote properties, and indeed the same properties: redness is the property of being red.

Furthermore, the property of being red (aka redness) seems to be identical to the property of *having the colour red*. The identity holds intuitively and it would be entailed by an intensional individuation of properties on which there are no two properties that are necessarily exemplified by the same objects; but it seems to hold on much finer individuations too.

Redness is a colour property then; that is, a property whose possession consists in having a certain colour. But is it also *a colour*? Being asked about the colour of something, we naturally use the pure colour words 'red', 'green', etc.—but *not* 'redness', 'greenness', and the like. So, there are differences in the usage of terms such as 'red', etc., on the one hand and 'redness', etc., on the other. Such differences might correspond to a difference between *colours* and *colour properties,*

talk about them as non-shareable particulars (or, as recent coinage has it, as *tropes*). We apparently can distinguish the colour of one rose from the colour of another rose merely on the grounds that two roses are involved—two bearers, two properties (colours).

Pointing to our lemon, we may say things like: 'that colour is *a* yellow (or a particularly nice yellow, etc.)' or 'that colour is *a* lemon-yellow'. Such statements may involve reference to colour tropes rather than colour universals. So, assume there are colour tropes and assume we do sometimes talk about them—then, perhaps, we sometimes count them. And this may resolve the Lemon Puzzle: When we count the colours of an object, so the idea, what we are counting are *colour tropes*. The lemon possesses exactly one such trope: a yellow trope. As a matter of fact (or even of necessity), this trope is also a lemon-yellow trope. It is an instance of both yellow and lemon-yellow (that one entity can instantiate more than one type should not surprise us; after all, that someone is both an instance of the kind *carnivore* and of the kind *human* is neither surprising nor does it make the man *two animals*). This would justify sentence P.6 then: When we say the lemon has only one colour, we talk about particular instances of shareable colours, and in fact, the lemon has but one such colour instance. But sentence P.5 does not deal with tropes (the definite article would not be appropriate then); it deals with shareable properties. Accordingly, its consequence (ii)—'the lemon has two colours'—deals with *shareable* properties, not with tropes. Hence, it cannot contradict P.6 to which we gave a trope reading. On this account, the Lemon Puzzle therefore involves some kind of equivocation in the term 'colour': This word exhibits a sort of type/token-ambiguity and it is not constantly used in one sense throughout the argument that leads to contradiction.

The described position would resolve the Lemon Puzzle as it was introduced above—but is it a good solution? I have my doubts. For, even if we ordinarily counted colour tropes when we count colours, we certainly *can* count shareable colours: We can, for instance, look at two objects and say how many colours they have in common. Then, we obviously do *not* talk about the number of *shared* colour-*tropes*: there are no such things. We then positively talk about shareable colours. Now imagine we have another lemon, call it 'Luc', which is of the same lemon-yellow as Leroy, but which has a big green spot somewhere. How many colours do Luc and Leroy have in common? The correct answer, of course, is 'one'. But now the Lemon Puzzle rears its ugly head again: after all, Leroy and Luc are both yellow and lemon-yellow, these are non-identical colours, etc. In this case, tropes will be of no help: When we talk about the number of shared colours, we do not talk about tropes. So the trope-solution to the Lemon Puzzle seems inadequate.

12.3.3 Determinables and Determinates

Some properties stand in a very peculiar relation to other properties: they are determinate *cases, specifications,* or *varieties* of the latter. Colours are a case in ques-

as Levinson (1978, p. 4) assumed. But is there a philosophically interesting account of this difference? Or is it only an idiosyncrasy of our language? Since I do not have a definite opinion on this point, I use the cautionary formulation in the main text.

tion: Lemon-yellow is a specification of yellow. With a terminology taken from E. J. Johnson (1921, Chap. 11), such pairs of properties (or property-like entities) are often called determinates and determinables. Let us, for the nonce, assume we understand the relation between determinates and determinables. The two colours involved in the lemon puzzle, lemon-yellow and yellow, stand in this relation. This observation may lead to an idea about how to resolve the puzzle:

> **Det** What we are counting when we count colours are only *perfectly determinate* colours, not *determinables*.

Assume, **Det** is correct. Then to say that an object A is monochrome amounts to saying that it has only one *perfectly determinate* colour. It may and will nevertheless have a number of other, determinable colours, of which the determinate colour is a case. But we do not count determinables when we count.

If we follow this line of reasoning, 'A is monochrome' should not be rendered as:

Mono $\exists x\, \forall y\, (x = y \leftrightarrow (y \text{ is a colour } \&\ A \text{ has } y))$,

as it was rendered above. Rather, it should be rendered as:

Mono – D $\exists x\, \forall y\, (x = y \leftrightarrow (y \text{ is a perfectly determinate colour } \&\ A \text{ has } y))$.

And **Mono-D** is compatible with the following statement:

Colours $\exists x\, \exists y\, (x \neq y \,\&\, x \text{ is a colour } \&\ y \text{ is a colour } \&\ A \text{ has } x \,\&\, A \text{ has } y)$.

After all, two colours that A has and that are not both perfectly determinate will make **Colours** true without making **Mono-D** false.

Thus, based on **Det,** we can offer a solution to the puzzle: The derivation of the contradiction is based on an inadequate rendering of P.6. In its natural reading, P.6 does not conflict with the fact that there are two colours that Leroy possesses, if at least one of the two colours in question is not perfectly determinate. Note that P.6 will probably *also* have the reading employed in deriving the contradiction, since this is the straightforward result of deriving its meaning by compositional principles. So, on the current proposal, the sentence allows for two different interpretations; this might either be because it is ambiguous or because of some contextually salient quantifier restriction. The question need not be decided here.

So far, so good. Does anything speak against this solution? One may have a doubt about **Det**: for sometimes we are inclined to say that some object has only one colour (namely, yellow) even though this object is not *perfectly* homogenously coloured (it *is* yellow *all over,* but one *could* distinguish some shades of yellow in it). So sometimes we seem to count determinable colours, and not perfectly determinate ones.

Here the proponent of **Det** may reply that in such a case, we speak rather loosely: It would just be more correct to say that the object *does* have more than one colour. Although this response is not obviously mistaken, it should be noted that we would speak loosely *most of the times* then, and that usually the correct answer to the ques-

tion about the number of colours some object has will be: *indefinitely* many. For wherever there is a smooth transition of colours, there will be indefinitely many perfectly determinate colours involved.

Perhaps, we can improve upon **Det** without giving up its central idea. Why not say that sometimes we do indeed count determinable colours, but we never simultaneously count a determinable *and* a determinate of it:

> **Det*** When we count colours, we count only those colours that are not determinates or determinables of one another.

Det* still provides the material to solve the puzzle. For, if **Det*** is correct, '*A* is monochrome' should be rendered as:

$$\textbf{Mono}-\textbf{D}^{*}\quad \exists x\,\forall y\,(x = y \leftrightarrow (y \text{ is a colour } \&\ A \text{ has } y\ \&\ y \text{ is neither a determinate nor a determinable of } x)).$$

And this is still compatible with **Colours,** such that the derivation of the contradiction would again rely on an inadequate reading of P.6.[5]

12.3.4 Counting Regionwise

The determinable/determinate account fares much better than the trope account. It presupposes, however, the determinable/determinate distinction which itself is not beyond doubt. While the idea of that distinction seems intuitive at first, spelling it out precisely has turned out to be rather problematic.[6] And not only is the exact analysis of the distinction disputed, but also what kinds of things are distinguished by it, i.e. whether it should be understood as a distinction between two types of (a) predicates, (b) properties, or (c) concepts. As long as a robust account of the distinction is missing, the solution to the Lemon Puzzle might be paid for with a bounced cheque. A related, but more general worry is that a solution in terms of determinates and determinables might be too theoretically laden. The puzzle arises from how we ordinarily talk about colours and how we count them. But it may appear as if we can talk about and count colours without much knowledge about the distinction between determinables and determinates, especially since the latter distinction seems philosophically dodgy. Of course, appearances might be deceptive so that ordinary speakers know much more about that distinction than it may seem at first. They might have some kind of implicit knowledge of it, manifesting itself, for instance, exactly in such cognitive procedures as counting colours. Nevertheless, it seems

[5] The determinable/determinate solution may seem natural to many philosophers. As far as I know, though, the solution has not been worked out in any detail before, just as the puzzle has not been stated in print before. Moreover, the connection between the determinable/determinate distinction and the counting question is not mentioned in recent contributions to the debate about determinables; see, for instance, Funkhouser (2006) or Sanford (2011).

[6] For a survey of the problems related to the distinction, and of the relevant literature, see Sanford (2011).

at least worthwhile to me to explore whether there is an alternative solution to the Lemon Puzzle that can manage with less theoretical ballast.

As will now be shown, such a solution is suggested by a somewhat phenomenological reflection about how we actually *proceed* when we count the colours of a thing. So, how do we start counting colours? First, we look at the coloured object; we look at one region that has some colour. Then we go on looking whether anywhere else the object has another colour instead of it. *Instead of it*—that is, we look for some region *lacking* the colour of the first region while still having some colour. If we find one, the object has at least two colours. We then proceed as before—just that now we look for coloured regions lacking the colours of both the first region and the second region. If we find one, the object has at least three colours, etc.

What will be the result if we thus inspect Leroy? We start with one region and go on to look for another region which is differently coloured. But we won't find any. Of course, we may suddenly realize that one region of Leroy is lemon-yellow—but that does not raise the count, because Leroy is not lemon-yellow *instead of yellow* at that region (recall that '*x* has *C* instead of *C**' was spelled out as '*x* has *C* but lacks *C**'). On the contrary, we will have to realize that the starting region was lemon-yellow *too*.

The given description of how we proceed in counting the colours of an object is a sort of idealized rational reconstruction. As such, it abstracts from particular cases and serves only as a basic model for them, while not necessarily being faithful to every empirical aspect of a given case. An aspect in which the model might be amended for greater empirical adequacy concerns, for instance, its presupposition of a procedural nature of counting. While initially counting certainly seems to be a procedural affair, we arguably sometimes conduct a count in an instantaneous fashion. For, often when we see an object, we can tell *at one glance* how many colours it has. It remains, of course, an empirical question for neuroscience whether such a recognition is, albeit seemingly instantaneous, nevertheless backed up by quickly performed cognitive processes. But suppose it is not and counting can occur at an instant. The above description of counting could then be adapted accordingly. Assume, for instance, Argle sees at one glance that Leroy is monochrome. In such a case, Argle receives a complete visual representation of Leroy and instantaneously recognizes that there are no two regions of it with different colours (such that Leroy has a colour in one region which it lacks in the other). This description saves the spirit of the proposal but pays respect to cases of instantaneous counting.

In the previous section, I noted that we sometimes arrive at different counts depending on how scrupulous we are about counting different shades of a colour. The present proposal can easily accommodate this fact: When we start counting, we choose a region and a colour it possessed. Here, we may make a more or less specific choice, which will affect the result of looking for regions that lack the colour ascribed to the first one. (Assume we examine an object with three shades of yellow; if we first choose *yellow,* we will not find regions lacking the colour, but if we first choose *lemon-yellow,* we may.)

I take it that this is a good description about how we count colours, then, in effect, what we are counting when we count colours as possessed by certain equivalence

classes of regions. If this is our standard procedure of counting colours, it may affect what we mean when we say an object *A* is *monochrome*. This statement, then, should *not* be rendered as it was earlier:

Mono $\exists x \, \forall y \, (x = y \leftrightarrow (y \text{ is a colour } \& \, A \text{ has } y))$.

Rather, it should be rendered as follows:

Mono – R $\exists x \, (x \text{ is a colour } \& \, A \text{ has } x \, \& \, \neg \exists y \, (y$ is a colour & at some region, A has y instead of x)).

And **Mono-R** is compatible with:

Colours $\exists x \, \exists y \, (x \neq y \, \& \, x \text{ is a colour } \& \, y \text{ is a colour } \& \, A \text{ has } x \, \& \, A \text{ has } y)$.

For, two colours can make **Colours** true without making **Mono-R** false, if only they are present at the same regions (such that they do not satisfy 'at some region, *A* has *x* instead of *y*').

So, in one sense, it is true that Leroy has two colours (there are two colours, yellow and lemon-yellow, which it possesses). But this is not what we ordinarily mean when we count colours and say that an object has two colours: then we talk about colours possessed *instead of each other* at different regions. Just like the determinative- account, the current one therefore attributes two possible readings to P.6. So we can dissolve the puzzle by pointing out that the derivation of the contradiction relies on an inadequate rendering of P.6: properly understood, it does not conflict with (i). Hence, the puzzle is solved.

12.4 Comparison

12.4.1 Ideology

Two of the four proposals discussed seem to deliver the goods. Let us call them the *determinative* and the *regional* account. Are there reasons that favour one of them over of the other? One relevant point was mentioned earlier. The determinative account employs a distinction which is not unproblematic. Even if the distinction turns out fine in the end, the ideology of the determinative account will remain more demanding than that of the regional account. Other things being equal, this would incline me to opt for the latter account.[7] But there are other factors relevant for choosing between the proposals.

[7] It was suggested to me that the two proposals may, in the end, turn out to be stylistic variants of each other, and that the regional account therefore does not manage to avoid the determinable/determinate ideology. Although I am sceptical about the suggestion, I cannot easily show that it

12.4.2 Generality

An important aspect is whether the solutions can be generalized to parallel cases. Obviously, the determinative account can be applied to any variant of the puzzle in which the determinate/determinable distinction is applicable. The regional account, on the other hand, seems to be much more limited. It can straightforwardly be applied only to cases of properties (or other abstract features) that are regionally possessed by an object. But many properties are not possessed at a region, and the puzzle can apparently arise for such properties too.

12.4.3 Limitations of the Regional Account

Let us take a look at an example: shapes. Even if we usually do not count the shapes of an object (because the boring answer would always be: one), we *may* do so. Now imagine a square object. It has (as usual) only one shape, although it is both square and rectangular, and being square is not the same as being rectangular. Can the regional account deal with the shape puzzle (which obviously is a variant of the Lemon Puzzle)? The problem is that it does not seem as if we counted shapes regionwise.

Two strategies are possible. First, one may try to argue that actually we do count shapes regionwise, but that there is only one region which matters: the shape is all over the object. So we pick a starting region (there is not much to choose), we pick a shape *S* that the object possesses at that region, and we look for another region at which the object lacks shape *S* and possesses another shape instead. Since we cannot find any (there are no other relevant regions), the count will always be one.

Therefore, the regional account is directly defendable in the case of shapes, but I admit that there may be some tricky flavour to the given defence. Moreover, there are many properties which are certainly not possessed at regions, so the defence is of limited value.

A second and better strategy of using the regional account for counting shapes involves a modification of it. In its current form, region seems essential to the account. But we can describe the proposal on a higher level of abstraction as follows: we count properties with respect to some additional parameter at which they occur. The regional account is a variety of this generalized proposal in which the parameter in question is taken to be spatial (a region at which a property is possessed). But as far as the general idea of the proposal is concerned, the parameter need not be spatial. In certain cases, some other kind of parameter might be pertinent, for instance, a temporal one (such that we count properties as possessed at different

is wrong. But notice that the regional account only makes use of highly basic notions (having and lacking a property) which certainly do not have to be analysed in terms of the notions of determinates and determinables. So, if the proposals converge, it is only because the regional account somehow involves the material of analysing the determinate/determinable distinction and not vice versa. On the assumption of a convergence, the regional account might then still be preferable.

times) or one of still some other sort. We may call the introduced generalisation of the regional account the *parametric account*.

Now, let us return to the shape-variant of the Lemon Puzzle. I remarked earlier that we usually just do not count the shapes of an object; after all, we know the result of the count in advance. Any shaped object has exactly one shape. Nevertheless, in certain situations such a count makes sense, namely if an object *changes* its shape over some time. Then we may count the shapes that the object possessed during a certain period. Imagine, for instance, an amount of dough that we moulded into a cube first, then into a ball, and finally into a cube again. How many different shapes did the dough possess? Setting aside the periods in which we were actually moulding the object (otherwise, the correct answer would be 'countless'), the answer is 'two' (even though, in its cubic stage, the object was also cuboid). Here, a temporal variety of the parametric account would yield the correct result: When we count the shapes that an object possessed over some time, we actually count shapes as possessed by certain equivalence classes of times or phases. Begin with a phase at which the object does not change its shape and a shape *S* that the object has at that phase. Now, look for another phase at which the object lacks *S* but has another shape *S** instead. If there is such a time, the count goes up to two. We then look for another time at which the object lacks both *S* and *S** (and so forth). In our example, the count will stop at the second step. If we decided to classify the object as cubic at the first stage, we will find another stage at which the object lacks that shape but is spherical instead. No other stages are relevant (if we choose to classify another stage as cuboid now, it will not raise the count, since at that stage the object is *both* cuboid and cubic and therefore does not lack the shape of the first stage).

This variety of the parametric account can handle how we count shapes then; we count them phasewise. In other cases of properties, still other varieties of the parametric account apart from the regional and the temporal variety may be required. Such modifications are faithful to the original account as long as they find a parameter of some sort with respect to which the properties in question are plausibly counted.

So, although the original regional account is clearly limited, the generalized parametric account has much broader applications. Still, it might be limited to some degree. Perhaps there are variants of the Lemon Puzzle in which no parameter can be specified with respect to which the properties in question are counted. If so, the determinative account might score against the parametric account in terms of generality.

12.4.4 Limitations of the Determinative Account

On the other hand, the determinative account may have limitations of its own. Here is one: The determinable/determinate distinction is often contrasted with the genus/species distinction, where a species can be defined in terms of its genus and some

differentiating features.[8] And variants of the Lemon Puzzle apparently can arise in cases of species and genera too. This is witnessed by the example of shapes: A square object has only one shape, even though it is square and rectangular. That we do not count such an object as having two shapes cannot be explained by the determinative account, in so far as being square is a species of being rectangular, not a determinate of it.

One might try to make the determinative proposal more general. A straightforward possibility would be to make it disjunctive. Roughly, the proposal would be that if we count properties or features of some sort, we do not raise a count because of two properties which relate to each other as either determinate to determinable, *or* as species to genus.

12.4.5 Taking Stock

So far, the discussion on the respective advantages of the determinative and the parametric account remains inconclusive. Both accounts are able to solve the Lemon Puzzle and both of them are applicable to at least a range of parallel cases. For the time being, I shall rest content with this result.

12.5 Epilogue

Bargle I've thought about your puzzle and I came up with two possible solutions. Even if it was a neat puzzle, I knew that my belief in colours (which are non-material entities) was never really threatened by it.

Argle I see; your proposals may be working. In fact, I like your account of regionwise counting. It might provide the means of explaining what we *really* do when we seem to be counting colours: we are counting regions that look alike in some way.

Bargle No. Even if our practice of counting colours may be connected to the practice of counting regions, the regions can never replace the colours. If you want, I can show you why not.

[8] Johnson himself did not seem to place too much weight on the contrast, as Sanford (2011, § 1.3) points out. But many regard it as substantial. It has been argued, for instance, that determinate/determinable pairs and species/genus pairs come apart with respect to the order of explanation or grounding. A thing possesses a determinable property because it possesses the corresponding determinate one; the order of grounding or explanation here runs from the specific term to the more general one. However, since conjunctions are explained in terms of their conjuncts, something belongs to a species (it is F and G) partly because it belongs to a genus (it is F); here the order of grounding runs from the more general term to the specific one. On the issue, see Rosen (2010, pp. 126–130), Schnieder (2006, p. 32f.) on 'because' and determinables, and Schnieder (2011) on 'because' and conjunction.

Argle No thanks (at least, not right now). In any case, I think the discussion of the puzzle was worthwhile. For, notice that in both your proposals you had to use some unorthodox way of counting colours: We are *not* just counting non-identical colours, as one would have thought at first.

Bargle Is that a problem? I thought you agree that the proposals I came up with solve your puzzle.

Argle They do. But recall our other controversies, as for instance that about holes. Since my account of holes as material objects appeared to be at odds with how we count holes, I was forced to spell out some non-straightforward method of counting holes: We do not count *non-identical* holes, but rather holes which are *not the same,* where the sameness of two holes consists in their being co-perforated. You thought this proposal is unnatural and makes my materialist position less attractive.[9] But now we see that you have to resort to the same kind of manoeuvre when it comes to abstract entities and our practice of counting them.

Bargle Point taken. I should better grant you such moves in the future.

Argle So, rehearsed and refreshed, let us return to—say—the question of holes.

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[9] Cp. Lewis and Lewis (1970).

Chapter 13
Predication

Paolo Leonardi

Abstract In the sentence "Tom sits," the name distinguishes Tom from anyone else, whereas the predicate assimilates Tom, Theaetetus, and anyone else to whom the predicate applies. The name marks out its bearer and the predicate groups together what it applies to. On that ground, his name is used to trace back Tom, and the predicate is used to describe and classify what it applies to. In both cases, the semantic link is a direct link between expressions and particulars. Here, I will explore the workings of predicative names along the direction just hinted at. The analysis of predication has been less central to philosophical investigation than that of referential expressions. Some problems have concerned the unity of the sentence—what makes us understand "The baby cries" as a sentence rather than a list of words? Other problems have been what a predicate was taken to stand for, properties and relations, and the understanding of either at the ontological level. If a predicate refers to a property or a relation, yet predication, which is central to our understanding of predicates, applies it to one or more particulars. On the background hinted at, these problems might be differently viewed.

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13.1 The Predicate

In the sentence "Tom sits," the name distinguishes Tom from anyone else, whereas the predicate assimilates Tom, Theaetetus, and anyone else to whom the predicate applies.[1] The name marks out its bearer and the predicate marks together what it applies to. On that ground, his name is used to trace back Tom, and the predicate is used to describe and classify him. Here, I will minimally sketch a picture of predication, which deems this notion a primitive semantic one along with reference, and the first differing from the second by one trait. Predication is proper to predicates

[1] Of course, if the predicate "sits" assimilates Tom and Theaetetus, it distinguishes them from Socrates and Theodorus who are standing.

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playing their role, i.e., predicating predicates, rather than to nominalized ones (such as "talking," in "Talking is something I like to listen to").

Besides, I will discuss one or two aspects of the two most famous almost contemporary or contemporary views of the predication, Gotllob Frege's and Donald Davidson's.[2] I will devote no attention to issues such as whether a property, a relation, a concept, or the like matches a predicate,[3] or to topics like that of the unity of the sentence.[4] About properties and the like, I take semantic grounds to be too thin for ontological posits. Hence, no call for properties and the like, without excluding that there be properties and the like.[5] Ontological posits, moreover, require a theory, which at its turn needs a language to be formulated.[6] About the unity of the sentence: Such a unity looks problematic because of a regress. A regress indicates the need to acknowledge something suitable as primitive, and as I said, I take predication to be primitive, and a proper appreciation of its workings to dispose of any need for extra elements accounting for the unity of "Tom sits," and of any other sentence.

A *caveat*. My picture of predication is proper to simple, primitive predicates. A compound predicate, like "being Adelaide's first child" describes uniquely Marco, and thereby distinguishes him from anyone and anything else. Simple and primitive predicates are the warp and woof that make up compound predicates, which can finely classify any thing. Anyway, notice that a compound predicate that uniquely describes an individual is one anchored to another individual—in the example above, the predicate uniquely describing Marco is anchored to Adelaide.

a. *A name and a predicate as marks, but marks added to play two different roles—marking together* versus *marking out*. Assume that a name marks a thing. If we had a very limited number of names, one or two—for instance, just "this" and "that," as Bertrand Russell once suggested—names would not mark out a thing but for the occasion, more or less as a demonstrative does, and we could use names to refer only in the same way we do with demonstratives. Alternatively, we would stably point out two things and no more. Actually, we have enough names to mark out many a thing. Assume that a predicate too marks a thing. Again, if we had a very limited number of predicates, say "is as this" and "is as

[2] For two very different and limited surveys on predication, see Gibson (2004) and Meixner (2009).

[3] I am interested in *application* as a semantic relation different from *reference*. I am inclined to think that by predicating, we attribute a property to a thing or a relation among *n* things. But I do not think that is what our semantics involves, and though I believe interesting an investigation on the nature of properties and relations, I think the issue to be a second further topic.

[4] As I would prefer to term it, rather than "the unity of the proposition."

[5] Some arguments can be provided for my stand. One, we need language to assess most issues, and any extralinguistic assumption made in fixing the language evades assessment. Two, we master the same language even though some of us believe there to be properties and relations, other people believe there to be only concepts in the common, non-Fregean, understanding, and some other people believe there to be only words and objects. Then, language by itself does not force to choose the ontology we speak of by means of it.

[6] We need a language, with a semantics, before running any inquiry, metaphysical or of any other kind. Perhaps, that makes philosophy of language into first philosophy—first in a rather humble sense.

> that," our classification of things would be very poor and constrained to the context in which it were articulated. Our description too would be restrained to the context of its delivery. Alternatively, we would be able to run a partition of things into two groups and no more, and to describe any thing only in one of two ways. But we have indefinitely many predicates, simple and compound ones, and can therefore run taxonomies at every degree of sophistication, and describe in detail any thing whatsoever.

Applying different predicates to one and the same thing—"sits," "is a skier," "is a lawyer," "is a human being," etc.—we link a thing with as many different networks of things as we like. In the "is a human being" and "sits" networks, there are both Tom and Theaetetus, but only Tom belongs to the "is a lawyer" and "is a skier" networks too, as only Theaetetus belongs to the "is a mathematician" and "is a Greek" networks too. As a lawyer (and as a human being), Tom is classified together with Abraham Lincoln. As a mathematician (and as human being), Theaetetus is classified together with Georg Cantor. Tom and Theaetetus, Tom and Lincoln, and Theaetetus and Cantor share a set of marks, and there are marks that Tom and Theaetetus do not share. The predicate marks what it applies to, grouping all what it applies to—indeed, the predicate *marks together* what it applies to.[7] Sharing one or more predicates may be some of the features things partake. Both Tom and Theaetetus are human beings, both sit, etc.—as Theaetetus and Cantor and as Tom and Lincoln. Adding the same mark to things highlights their similarities, and a specific mark can be specialized to highlight a specific aspect—"sits" stresses sitting, "is a human being" being a human being, "is a lawyer" being a lawyer, etc. I can fancy the development of predicate markers as follows: A proto predicate marker amounts to "is like this," and it refines shifting to "is *F* like this" and finally becomes "is *F,*" as in "is like this," "sits like this," "sits"—at the end, we have a (*predicative*) *name* for (*having*) *that feature*![8]

Linguistic items, both names and predicates, are *objects,* I surmise, spread out through the environment and added to other objects, thereby marking them. So far they do not differ, and both are direct links. They diverge on how the two marks are used (which is a good reason for having distinct forms for the kinds of mark). The name mark adds to the particularity of the object, ideally being exclusive. The predicate mark by being repeatable, and mostly repeated, adds to the similarity of the objects. This way, each kind of mark fulfills *a cognitive aim,* respectively distinguishing and likening (and distinguishing) objects, i.e., grouping them. Upon this cognitive role, linguistic items come to other roles, names stand for or represent (as a lawyer may represent a company), and predicates (and sentences) classify and describe. Once a linguistic item marks out a thing or indicates a thing with a specific aspect, it can be reproduced respectively to trace back the thing and to describe or

[7] A relational predicate marks n-uples of objects. Not to get confused, we may imagine that the mark keeps trace of the n-adicity and of the specificity of the n-uple.

[8] Prima facie a predicate describes a thing under an aspect, or classifies the thing by means of an aspect of it.

(explicitly) classify a thing with that same aspect. This way, the semantics of the language is the outcome of language use.[9]

b. *An expression and its semantic value.* Marking an object establishes and refreshes the link between a predicate and what it applies to. Whereas a name marks its semantic value, a predicate marks an element of its range—and it can be debated whether it thereby marks its semantic value or an element of its semantic value. Indeed, the element anchors the predicate, in whose range fall other elements, if any, which are *like* this one. "Tom" has Tom as semantic value, and Tom sitting anchors "sits." Tom instantiates sitting in full, so to speak. If there are other people sat, that might help in understanding sitting, but what the predicate marks out can be fully grasped in that one instance. If Theaetetus sits, Theaetetus is as good a representative of sitting as Tom is—indeed, he too instantiates sitting in full. And for this reason, I am inclined to think that the instance provides the semantic value of the predicate.

Our competent use of names is linked with knowledge of their semantic values. At the origin of the use of a name, there are people who know whom or what it names, i.e., its semantic value, though many and perhaps most of the names we use we have picked up from other people, not directly knowing whom or what they name. I have never been on the Himalayas, but I use the name "Mount Everest" (and the name "Himalayas" itself) with enough appropriateness. In many a case, as with historical characters like Plato and Octavianus, we cannot anymore directly know whom they name. Aristotle is one of many sources through which we have learned to use the name "Plato," and Aristotle directly knew Plato. If a name marks out a thing, it is easy to see that the proper use of the name comes out of directly knowing whom or what it names. With predicates, things are slightly different. Simple predicates that are not abbreviations (that are not introduced to abbreviate complex ones) may apply to indefinitely many things,[10] and possibly in no circumstance everything they apply to is known, and if everything is actually known, possibly it is not known to be known. Hence, the semantic competence in using a predicate does not consist in knowing all the things it applies to. Knowledge of *some* thing(s) it applies to is what grounds predicative semantic competence, and perhaps it is knowledge of a predicate's semantic value—because the thing fully instantiates the predicate. As with proper names, there are predicates we have picked up from other people, with-

[9] Two side remarks: (1) As the above remark on individual predicates might have suggested, things are pointed out by name as well as by description—"*Adelaide's first child* is sleeping"—and are classified by names as well as by comparing them directly with other individuals—as in "She is *like Adelaide*" or "She is *another Adelaide*." Actually, in most cases, the description we successfully use is not an individuating one—"*Adelaide's child* is sleeping" very often can do.

(2) A proper name ideally distinguishes a person from anyone else. Actually, there are homonyms. We solve our individuation problems adding other marks, be those other proper names, for example, family names added to first names, or expression built on a predicative core such as a description. We need a balance between being able to finely distinguish what we want to distinguish and use a finite vocabulary.

[10] "Is identical to Tom" clearly does apply to only one thing if any.

out directly knowing what they apply to—though because predicates have a general dimension (they might apply to *many* things) and names do not, of many a predicate we directly know instances. I do not know any aardvark, nor its look, its habits, its habitat, etc. I have picked up the name from people and am capable of using "aardvark" with very limited appropriateness—I know it is an animal, somehow resembling an anteater, an animal you can find in Africa, and other few things. At the origin of the use of the predicate *F,* here again, there are people who have, or had, knowledge of representatives of its range. I know the meaning of "sits" because I know that Tom is sitting, and that enables me to tell that Theaetetus sits too and to learn other people about the use of "sits."

Through instances, we anchor a predicate and come to know (part of) its range. When we pick up names and predicates from other people, words, pictures, and other representations mediate our knowledge of their semantic value or of what anchors them. It is mediated, i.e., by words or by things. If it is mediated by words, if we know what they refer or apply to, we can ask, eventually getting to words we know what they refer or apply to. If it is mediated by things, such as pictures and other representations, these things portrait or represent what the words relate to.

An argument against the suggestion that the semantic value of a predicate be fixed via instances can be derived from views about predicates applying to nothing. Tom is "Tom's" semantic value if and only if Tom is the individual the name marks out. If "Tom" were no one's name, it would have no semantic value. If Tom sits, he instantiates "sit" and anchors the predicate's semantic value. But if "sit" did not describe or classify anybody, we might resist claiming it has no semantic value, as if there could be an aspect even if it were no one's or no thing's aspect. Perhaps, we would deny a predicate a semantic value if it were *impossible* for it to be a thing's aspect, as it is the case with "is a round square." In general, if we attributed a predicate a semantic value, different from an instance, we would either assume new kinds of entity, or concoct special assemblages of old ones. If the semantic value of a predicate were the set of things that it applies to, the null set could be the semantic value of a predicate that applies to nothing, as a matter of fact or as a matter of principle. Whereas, if names are projected to elements of sets that are not sets themselves, an empty name would not have any semantic value at all.

Here is a counter suggestion. A predicate with no instances is either simple or compound; if it is compound, its range is either contingently empty—as "is a golden mountain close to Ravello"—or necessarily empty—as "is a roundsquare." In either case, we seem to grasp the predicate's semantics because we grasp the semantics of its components (which have instances). If the compound predicate is contradictory, it is not clear whether it can be conceded a grasp of the predicate, since there is no grasp of what it would be to satisfy it. The semantics of a simple empty predicate does not even start, because the mark has never been posted—hence, the predicate is vacuous as an empty name is. And it is not clear whether grasping an empty set provides more than what no grasp at all supplies.[11]

[11] A third-world entity would perhaps offer a better grasp, if it were graspable at all, but its application to standard objects is, as everybody knows, problematic.

Summing up, the semantics for predicates I advocate anchors them to one or more instances.[12] As we have only glimpses on individual things that are the semantic value of names, we have only glimpses at the more articulated semantic values of predicates, often knowing a limited number of instances.[13] This excludes neither there being simple predicates that are true of only one individual nor there being compound individual predicates, such as "being Adelaide's first child"—a predicate I discussed above. The difference is that in the first case the predicate is shareable, but not shared, and in the second, the composition in principle excludes sharing. Individual predicates are not alike proper names—they classify and describe an individual, and its components often assimilate that individual to other items or distinguish it from them. (There are, perhaps, predicates alike proper names, such as "socratizes." Indeed, if there are not, we can concoct them. "Socratizes," when it is not understood as "imitates Socrates," just distinguishes the individual it applies to from anything else. And if we reflect on the case and judge an expression by its role, we would call "socratizes" a proper name in disguise.[14])

In my view, as naming starts from the thing to be named, so predication starts from the thing, or the things, to be classified. Applying a predicate turns the thing it marks into a standard sample—of sitting, being human, being a friend of, etc. Actually, this is likening the thing to something else, and always also, as I just said, adopting a standard. What resembles the model sample is naturally marked the same way and thus further assimilated to the sample. Being classified and described as the original sample is, it itself becomes another model sample.[15]

[12] There is very little literature on the semantics of exemplifying. See Austin (1953) and Goodman (1968). None is satisfying, because both assume there to be the example and the predicate, and what worries them is matching examples and predicate, i.e., they do not see the match as constitutive, ever.

[13] If we know the semantic value of a predicate by means of one or more representatives, our judgments in acknowledging a new element as one to which it applies may vary depending on the different representatives we know that value from. This does not make predicates very different from names. If I had been to London in the 1960s and you 5 years ago, I may claim a picture from London not to be one and you argue it is, or vice versa.

[14] For a different stand, meticulously argued for, see Fara (2011).

[15] One of my readers, the most competent, raised a quibble here about me insisting that a predicate classifies, suggesting that "sits" or "is red" does not classify. My reply is that I can classify some objects in my office as "books," and then classify the books as *red, blue, yellow,* etc., and classify the three people in my office as *sitting* or as *standing*. If a predicate marks together what it applies to, it classifies.

I claim also that predicates describe. There is a preferential understanding of description as a perceptual description, but here I have no preferences. I can say that Giorgio obsesses with money, and that seems a nonperceptual description.

13.2 Two Different Views of Predication

13.2.1 A Metaphysical Understanding with a Proper Notation

According to Gottlob Frege, predicates are unsaturated expressions, which voice unsaturated senses that determine unsaturated entities, entities which the expression denotes. An unsaturated expression has one or more gaps eventually indicated by a placeholder (a variable). A saturated expression saturates an unsaturated one by filling its gap. Unsaturated senses and entities are like unsaturated expressions and are saturated respectively by saturated senses and saturated entities. A concept is an unsaturated entity, and an object a saturated one. A concept is the denotation of a predicate and an object that of a name.[16] Predication is the saturation of a predicate, for instance, by a name.

The application of the predicate to the name is a one-step business, whereas the application of the denotation of the predicate to the denotation of the name is a two-step affair. The name denotes an object; the predicate a concept, the concept determines an extension, which the object denoted by the name falls within. This makes evident a main difference with my view of predication. Frege's solution rests on an ontological assumption, positing concepts as entities of a second kind not to be confused with the kind of objects. One such assumption contrasts with the idea that semantics is too thin a ground for ontological posits, or at least it develops semantics out of ontology.

Predicates are classifiers, for Frege as for myself. Positing concepts and their extensions makes the classification itself an element of what there is, and possibly the falling of an object under a concept into a matter of fact. This is at odds with viewing classification as *introduced* via predication, directly on objects, and with discriminating between natural and artificial classifications, which are clearly introduced via predication—artificial taxonomies in which we can distinguish between one dependent on performatives and verbal ones.[17] A performative-dependent classification is, for instance, any legal one. A contract is the outcome of an action and introduces legal properties and relations, like ownership and marriage, proper procedures, and appointments. Having a name whose first letter is an *m,* and hence any alphabetical ordering, seems a purely verbal ordering, even though a useful one at times.

Some final remarks. The unsaturatedness is a metaphor, given emphasis by Frege's conceptual scripture where predicates are expressions with lacunas, or argument places with a variable as temporary filler. Clearly, there is no entity "trapped"

[16] If we are inclined to see a concept as a property or a relation, since these can also be taken as the denotation of the nominal developed out of a predicate, and hence an object, better say that a concept is, with an ugly phrase and a neologism, a properting property or a relating relation. Object and concept, Frege repeatedly reminds us, are never to be confused.

[17] I think defining a predicate's semantics positing a concept conflates truth and reality—inasmuch as our representations are true, they represent reality.

within another entity, nor is the first a bare particular and the second an entity without substance. (I do not mean that Frege ever claimed either thing, but that persons could surmise either thing as their own understanding of Frege's metaphor.) Moreover, the distinction between sense and denotation aside, one could reserve one's judgment on the parallelism among expression, sense, and denotation.

Frege takes predication as functional application that maps arguments to truth values. This I believe to be no problem. The picture could be properly supported, allowing for very complex objects, and with a special understanding of the truth values, the True and the False. If the True were reality and the False its complement, a true sentence would be a way to determine reality, and a false one a way to determine its complement. In the same way, we use proper names. "Euripides' second daughter" perfectly individuates a person, though she being a complex "object," a lot more things are true of her. What is hard with the picture is that we could want to oppose deeming reality or the world to be a thing.[18]

13.2.2 Truth and Predication

Donald Davidson accounts for predication taking truth as the primitive notion. He moves from Alfred Tarski's conception of truth, turns it upside down, and defines satisfaction by means of truth. With truth comes the primacy of the sentence:

> As a pre-teen scholar I was taught how to diagram a sentence. At the top was the sentence […] Our interest in the parts of sentences, unless the parts themselves are sentences, is derivative […] Our interest in the parts springs from the need to explain important features of sentences. […] We can think of truth as the essential semantic concept with which to begin a top-down analysis of sentences, since truth, or the lack of it, is the most obvious semantic property of sentences, and provides the clearest explanation of what suits sentences to such tasks as expressing judgments or conveying information. (Davidson 2005, pp. 1–2)

The unity of the sentence is, according to Davidson, something to start from and not to yield at. A sentence is what we hold true; a predicate is what we carve out of a sentence taking out of it one or more singular terms; the semantic role of a predicate is specified by telling that it is "*true of* the entities which are named by the constants that occupy their spaces or are quantified over by the variables which appear in the same spaces and are bound by quantifiers" (Davidson 2005, p. 159). In this way, predicates are given a semantic role different from that of singular terms, without associating predicates with any new (kind of) entity.[19]

Davidson semantics looks light, which is a quality. Yet, I doubt its starting point. Two problems. One, I think we grasp the notion of truth, and hence that of holding true, by grasping the notions of reference and predication.[20] What would be grasping

[18] Are actual and possible worlds things? Possibly they are not, see Jubien (1991).

[19] Dummett (1973) seems to attribute an analogous view to Frege.

[20] A second quibble of my most competent reader is that we can grasp truth not only by grasping reference and predication but also by grasping assertions, suggesting the case of impersonal sentences such as "It's raining."

holding true (or, accepting) if it were not grasping that certain things satisfy a predicate? For sure, when we master a language, we can use the notion of holding true for interpreting another language. Two, I think we learn our first language starting from calling someone's attention (mother's, father's, etc.) and having our attention called to individuals or objects and their aspects (Tom, Euripides, soup, chair, red, round, etc.; see Bloom 2001).[21] In either problem, we face a plurality of individuals or objects, plus names and predicates (names and predicates are objects them too). *Adelaide, Kevin, Genève,* the *White Mountain,* the *Beagle,* etc., are individuals and objects that the names distinguish. Adelaide *runs,* Kevin *runs,* Genève *is a city,* the White Mountain *is* not *a city,* the Beagle *was a ship,* etc., are, or are not, instances of the predicates *run, be a city, be a ship,* etc., which the predicates group together or separate.

At one remove from that starting point and in one go, we can tell the meaning of the predicate and claim the truth of its application (cf. Kripke 1975, p. 701),[22] suggesting a paradigm, a standard, for future uses of the predicate.[23] A predicate's meaning gets refixed anytime we apply (or deny application of) the predicate to a new individual or object, because by that we provide (or deny to provide) another standard and another truthful application (or deny the application to be truthful, and consequentially to be a standard). Sometimes, two or more such standards for the same predicate do not look acceptable together, and then we refix the predicate's meaning, judging false something we previously deemed true and giving up at least one standard—continuously watching out and open to revise our maps by revising our previous use of any expression.

Although both originate from language use, truth and meaning relate to different aspects: Truth has to do with exactness and meaning with precision. In a map precision concerns structure and scale, exactness how (some of) the details of the map match items of the territory.[24] A map is more accurate when it is more precise and exact.[25] Almost the same can be said of a sentence or a narrative. If a mismatch

"Is raining" is a predicate, and the dummy "it" offers an impersonal reference to which that predicate is applied.

The sentence "It's raining" describes an event as one of the rain kind. We do not think that there is an object suffering the change—such as a river overflowing or a volcano erupting—nor an agent causing it—such as a boy breaking the window while playing soccer in the courtyard. The clouds which become rain thereby cease to exist.

[21] Though Bloom requires too much (entities, properties, events, and processes, besides objects).

[22] Kripke makes the use of the truth predicate dependent on mastering of the language.

[23] With language, there is no priority between meaning and matter of fact.

[24] Of course, there is also (urban) planning, which goes the other way, drawing a map and fitting the territory to it. Yet planning is more limited, and the action has to take care of the environment of the planning and on how it will react to our acting on it.

The disproportion between map and territory is clear when we consider that the map is itself an element of the territory. The map codes our knowledge of the territory in going through it.

[25] On the difference between "precision" and "exactness," see Austin (1962, pp. 127–128), and on accuracy, see Austin (pp. 128–129). Sometimes to get the general shape, however, we need to give up precision.

comes up, the map is changed to fit the territory. With a sentence, if there is a mismatch, we reconsider its claim deeming false what we took for true, being directed in the process by exactness; and then we look for a reformulation, to regain precision.[26] The quest for accuracy depends on a basic task we use language for, which is the transfer of information—as for centuries visual arts, from depicting to sculpture, and more recently photography, movies, and videos, aimed and aim at accuracy in transferring visual information.[27] Besides, there are a lot of truths introduced via predication, I would say, rather than truths linguistically represented, like the performative and artificial cases, which I have already hinted at: ownership, marriage, adoption, seller and buyer, extended family, etc.[28] Before law, there is no ownership, but possession; no marriage, but living together, etc.[29,30]

13.3 A Loose End

If a person believes that linguistic communication requires sentences, better she reminds herself that saying "Euripides!" is enough to call his attention to whatever has to come next, and to call other's attention to the kid running on the seashore. Or that my saying "Terrific!" while looking at the 100 m final in Beijing, August 16, 2008, is enough too, and there is nothing next to wait for. As the name is used without a predicate (which predicate would "complete" the utterance?), the predicate is used without a singular term (nor a general one at that; which term would complete

[26] Already denying the application of a predicate goes in this direction, preferring exactness over precision.

[27] Instead, language transfers information of *any* kind, though coding linguistically visual information, it is of course much less efficient in transferring this kind of information than a picture or a video is.

Language, as the other means, is used also for informing of things and events to come. In such a case, we may resort to an illocutionary act which is not an expositive in Austin's terminology, but a verdictive or a commissive.

[28] The house and the car are mine. The ownership in the end come out by literally classifying, on paper, the two things by words that amount more or less to *Paolo's property*.

[29] Davidson discusses repeatedly interrogatives, imperatives, and other nonassertive cases. There are harder cases, for instance verdictives, like assessments, and exercitives, like appointments. Davidson never touches on performative properties and relations. He is dismissive also of fictional cases and the like, claiming that they are parasitic on standard cases. Maybe, but when we imagine a far-fetched situation, of which we wonder whether it is a possible or an impossible one, it is not clear to me that they are parasitic on true cases.

[30] There are other arguments for taking holding true as not sufficient for accounting for meaning. (a) There are many speech acts, which do not claim anything, like directives and questions, and I do not think that all speech acts can be reduced to expositives as somehow Davidson (1979) suggests. (b) Paradoxes show us to be not in control of the expressive power of the language. Though each part of what we say is meaningful, we cannot tell whether the paradoxical sentence is true or false, and not even without a truth-value.

Besides, if it is wrong what I maintain above (see fn 10), any new meaningful sentence can be either *true* or *false,* and I do not see how we could get the meaning of the false ones following Davidson.

this other utterance?). The point of naming a person maybe just calling his attention; and if someone or something is absolutely salient, there is no requirement to add any redundancy to call attention to either. Most of the times we look for more than calling attention—we want to call attention to a specific thing or event—and most times persons or things are not absolutely salient. Then, we have to say more. Language is our tool to cognitively (and emotionally) alter a situation and we say as much as we deem relevant to the specific form at which we aim in the occasion. The more ambitious the target, the more clever the telling has to be.

This suggests a nonstandard look at language and the world, which I cannot enter into now. Language cognitively and emotionally adds to a situation already structured on either dimension. This makes the world-language matching rather rich.

The issue concerns the relation between words and things, a relation that is for sure retrievable via true assertions but that being required by any linguistic performance does not seem to be fixed by true assertion. An idea to be refined is to view linguistic fix as a case of coordinative definition.[31] Coordinative definition has been investigated by Hans Reichenbach to account for physics, and the natural sciences, for instance for the introduction of a unit of measure. Writes Reichenbach,

> There is a second kind of definition, however, which is also employed and which derives from the fact that physics, in contra-distinction to mathematics, deals with real objects. Physical knowledge is characterized by the fact that concepts are […] coordinated to real objects. […C]ertain preliminary coordinations must be determined before the method of coordination can be carried through any further; these first coordinations are therefore definitions which we shall call *coordinative definitions*. They are *arbitrary,* like all definitions; […]
>
> Wherever metrical relations are to be established, the use of coordinative definitions is conspicuous. If a distance is to be measured, the unit of length has to be determined beforehand by definition. This definition is a coordinative definition. […For instance, a statement such as] "A unit is a distance which, when transported along another distance, supplies the measure of this distance" […] does not say anything about the size of the unit, which can only be established by reference to a physically given length such as the standard meter in Paris. The same consideration holds for other definitions of units. If the definition reads, for instance: "A meter is the forty-millionth part of the circumference of the earth," this circumference is the physical length to which the definition refers by means *of* the insertion of some further concepts. And if the wave-length of cadmium light is chosen as a unit, cadmium light is the physical phenomenon to which the definition is related. […] In principle, a unit of length can be defined in terms of an observation that does not include any metrical relations, such as "that wave-length which occurs when light has a certain redness." In this case a sample of this red color would have to be kept in Paris in place of the standard meter. The characteristic feature of this method is the coordination of a concept to a physical object. (Reichenbach 1928, pp. 14–15)

In twentieth-century philosophy, a rich discussion ensued on the standard meter bar: Does the standard meter bar rigidly refer to the length *l* which the bar had at the moment of choosing it as the standard meter bar? Is the standard meter bar one meter

[31] The need of coordinating language and things can be better appreciated comparing linguistic with pictorial representation. A basic point is that language does not picture things. Otto Neurath, who devised an International Picture Language in the 1930s, writes: "The man has two legs; the picture-sign has two leg[-sign]s; but the word-sign 'man' has not two legs" (1936, p. 20). This is a basic and underevaluated feature of language.

long? If the standard meter bar is one meter long, is it so a priori, contingently a priori, etc.? The point is that in order to measure the world we need to use standard *pieces* of the world itself, and to choose length *l* as a standard is a coordinative definition *à la* Reichenbach. We can view speaking a language, I think, as starting the same way, linking words and things by coordinative definitions. It is not important here to investigate any details. As the meter bar acts by measuring things as *k*-times long as the standard bar, a predicate acts by categorizing a thing as an *F*-thing as the one picked out by the coordinative definition. A problem, and a virtue, of language is that here no international convention is called for, in Sèvres or anywhere else, but many a, if not any, use of a word have a claim to be taken as the standard. This is a first improvement on the idea. A second improvement is the acknowledgment that there are coordinative definitions of names too, because neatly distinguishing is as relevant as assimilating.

If we look at "Tom sits" as fixing the meaning of "sits," we would be reluctant to tell the sentence true,[32] or inclined to claim it true in a somehow empty way. But if fixing language and using it are not two separated moments, we can well recognize that sentence true. Speaking a language requires knowing how it is spoken, and picking up previous uses, instances, etc. But a mistaken use of ours, for example, may be properly directed at what it was taken to mean, and picked up and become a variant. Language is a collective enterprise whose owners are language users.[33]

In the past 60 years of philosophy of language, indeterminacy issues have been a major concern. If we take language as starting from coordinative definitions, indeterminacy is drastically reduced because there is in any such case no problem about going from word to thing, since the links between words and things start from the things themselves. And, of course, a coordinative definition warrants that meaning be "a channel for the acquisition of knowledge" (see Williamson 2004, p. 140).

Acknowledgments This chapter, as all the chapters in this collection, is dedicated to Kevin Mulligan, whom I met the first time in Freiburg, Germany, just when he was moving to Geneva. Kevin contributed to turn Geneva's into the best philosophy department on continental Europe, influencing the work of most of us analytic Europeans on the Continent. Reflective and passionate he was then, and always later.

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[32] In *On Certainty,* Ludwig Wittgenstein seems to hold this view.

[33] This is true more of predicates than of names. If it were not names would not perform their distinctive task.

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Chapter 14
Temporal Parts and Spatial Location

Damiano Costa

Abstract The literature offers us several characterizations of temporal parts via spatial co-location: According to these accounts, temporal parts are roughly parts that are of the same spatial size as their wholes. It has been argued that such definitions fail with entities outside space. The present chapter investigates the extent to which such criticism works.

Keywords Temporal parts · Spatial location · Events · Four-dimensionalism · Perdurance

14.1 Introduction

The temporal parts of an entity—according to current vulgate—incorporate 'all of that entity' for as long as they exist (Heller 1984; Sider 2001; Olson 2006). For example, a temporal part of Sam incorporates 'all of Sam' for as long as it exists. One immediate consequence of this fact is that some 'smaller parts' of Sam, like his brain and hearth, do not count as *temporal* parts of Sam, because they do not incorporate 'all of Sam' at a certain time.

To capture this, a suitable definition for temporal parts must exclude such 'smaller parts'. In this regard, two approaches have been put forward, a mereological one (Simons 1987; Sider 1997; Parsons 2007) and a spatial one (Thomson 1983; Heller 1984; McGrath 2007). On the one hand, the mereological approach says that such 'smaller parts' of Sam are not temporal parts because they do not overlap every part of Sam at a certain time. On the other hand, the spatial approach roughly says that such 'smaller parts' of Sam are not temporal parts because a temporal part is *of the same spatial size* as its whole for as long as that part exists.

Recently, some philosophers have attacked the spatial approach. In particular, Sider (2001, p. 59) blamed it for failing with entities outside space.[1] The reason for

[1] It is worth noting that there is a failure because on one hand there is a suggested formal definition of temporal parts, on the other, there is an already established intuitive notion and several

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such a criticism is easy to guess: How can an entity without any spatial size be of the same spatial size as something else?

Nevertheless, this criticism is less immediately conclusive than it would seem to be at first sight. For there are several ways of formalizing the spatial approach. And each way fails exclusively under specific ontological assumptions that are, as we shall see, anything but innocent, e.g. that there are entities that are partly inside and partly outside space.

In the course of the chapter, I shall discuss two versions of the spatial approach, respectively called *strong* and *weak*.[2] In analysing both versions, I will pursue the following strategy. First, I shall define temporal parts via one of the two versions of co-location. Second, I shall present systems in which the definition fails. The construction of the systems will reveal the ontological assumptions needed to rule out the spatial approach.

What does it mean for a definition to fail? Let us say that a definition for temporal parts fails in a system S just in case it does not capture our intuition about what the temporal parts occurring in S are; and that, a definition fails *tout court* just in case it fails in a system S and the system is realistic, i.e. the structure of S is isomorphic to the structure of the actual world.

14.2 Synchronic Parts

I shall begin by making the following point. The original aim of the spatial and mereological approaches is to exclude 'smaller parts' from being temporal parts. What are such 'smaller parts'? In order to answer this question, it is worth introducing the notion of *synchronic* part (aka *temporary* part, Simons 1987). I assume that 'smaller parts' mentioned before are nothing but synchronic parts.

A synchronic part is a part in time cut along a dimension that is not temporal. A classical example of synchronic part is a spatial part, where a spatial part is in time and cut along spatial dimensions. A basic characterizing feature of synchronic parts is the following one: If x is a synchronic part of y at t, then there are other synchronic parts of y at t (Simons 1987). Let us focus again on the example of spatial parts. If y has a spatial part at t, then it has other spatial parts at the same time.

We can formally characterize synchronic parts as follows. Let $t, t', \ldots$ be variables for instants[3] of time, and $l, l', \ldots$ be variables for regions of space. Let $x@t$

paradigmatic examples of temporal parts. The failure consists in the fact that the suggested formal definition does not capture all and only temporal parts. In this sense, the aim of this chapter is different from Parsons' (2007). Parsons' aim is to correctly define perdurantism. He wants a definition of temporal part adequate only with respect to this aim, and not (primarily) in comparison with the already established notion of temporal part.

[2] Here 'weak' means only that it works in a larger number of systems than the other.

[3] In what follows, I shall focus on *instants*, *instantaneous* locations and *instantaneous* temporal parts. Nevertheless, I shall provide the temporally extended counterparts in footnotes. In the first place, let $T, T', \ldots$ be variables for intervals of time. I shall not consider here what the temporally

mean that x is exactly temporally located[4] at t and $x \lfloor y$ mean that x is disjoint from y (i.e. it does not overlap y).

Definition 14.1 SP(x, y, t) (x is a synchronic part of y at t)

$$\mathrm{SP}(x,y,t) \coloneqq x \ll y \wedge x@t \wedge \exists z\left(z \ll y \wedge z@t \wedge z\lfloor x\right)$$

The temporally extended counterpart would be: $\mathrm{SP}(x,y,\mathrm{T}) \coloneqq$ $x \ll y \wedge x@\mathrm{T} \wedge \exists z(z \ll y \wedge z@\mathrm{T} \wedge z \lfloor x)$.

With the formal apparatus introduced in this section, I am also able to formally sketch the standard version of the mereological approach M-TP $\coloneqq x \ll y \wedge x@T \wedge \forall z((z < y \wedge z@t) \rightarrow \neg z\lfloor x)$.

I will call an entity 'thick' just in case it has synchronic parts, otherwise I will call it 'thin'.

14.3 Strong Co-Location

Let @ be a triadic predicate for spatial location at a time:

$$x,t@l \text{ for 'at } t \text{ } x \text{ is located at } l\text{'}$$

@ is useful in the kind of cases in which we have to distinguish the spatial location of an entity at a time from the spatial location of the same entity at another time, e.g. in the case where we have to distinguish where Sam is now and where Sam was yesterday.

Now, let l be the binary function built on @.[5] Intuitively, this function takes an entity and an instant of time and returns the spatial location of that entity at that time:

$$l(x,t) \text{ for 'the spatial location of } x \text{ at } t\text{'}$$

The first version of the spatial approach simply requires a temporal part to be of the same size of the whole for as long as the part exists (Heller 1984; McGrath 2007). In other words, if x is a temporal part of y at t, then *the spatial location of x and that of y at t must be identical.*[6] Take as a definition of spatial co-location the following one:

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extended counterparts would be in the case of time being gunky or in the case of there being extended simples.

[4] Casati and Varzi (1999) and Parsons (2007) offer insightful considerations about location in general. I will not summarize their conclusions here. When I speak of location, I mean Parsons' *exact* location, e.g. the exact temporal location of Bertrand Russell is the interval between his birth (8 May, 1872) and his death (2 February, 1970). It is also worth noting that here I am introducing a triadic *predicate*, a piece of language, and I remain neutral, as much as possible, about the ontological counterpart of this predicate, i.e. I am not introducing a triadic *relation*.

[5] Here, I am assuming that an object has a unique (exact) spatial location at a time.

[6] Philosophers holding a spatial criterion of identity for objects or events could find this claim problematic, but this is a question we shall not consider here.

Definition 14.2 S(x, y, t) (x and y are strongly spatially co-located at t)

$$\mathrm{S}(x,y,t) \coloneqq l(x,t) = l(y,t)$$

The temporally extended counterpart would be $\forall t(t \ll \mathrm{T} \rightarrow (l(x, t)=l(y, t)))$.

At this point, we can attempt to give a first formal definition of 'temporal part'. Within this framework, proper[7] temporal parts are proper parts that exist at a certain time and are spatially co-located with their wholes. Let $\ll$ be proper parthood and @ be temporal location.[8]

Definition 14.3 S-TP(x, y, t) (x is a temporal part of y at t)

$$\text{S-TP}(x,y,t) \coloneqq x \ll y \wedge x@t \wedge l(x,t) = l(y,t)$$

The temporally extended counterpart would be $x \ll y \wedge x@\mathrm{T} \wedge \forall t \left(t \ll \mathrm{T} \rightarrow (l(x,t) = l(y,t))\right)$.

Definition 14.3 is the first definition of temporal parts via spatial location that I shall consider in this chapter. Here is a system in which Definition 14.3 fails (from this point, by 'TP entity' I mean an entity with temporal parts).

S1: TP entities outside space
S1 contains an entity y such that
(1) y is a TP entity
(2) y is outside space

Does Definition 14.3 fail in S1? Let x be a temporal part of y (by (2)). By (2), y has no spatial location, function l is undefined on it and $l(x, t)=l(y, t)$ is meaningless, or false. Therefore, x does not fulfil co-location and cannot be a temporal part, *contra hypothesi*. Definition 14.3 fails in S1, because it does not capture all temporal parts in S1.

Is S1 plausible? In other words, are there TP entities outside space? Candidates include classically mental events (Kim 1966, 1976; Gibbins, 1985), and other events (Price 2008). Another TP entity outside space could be time itself (Sider 2001, p. 59). Take the case where time can be divided into parts. The result of this division should count as a temporal part, because it is a part, it is (trivially) located at a time and includes 'all of time' at that time, i.e. there is not another part of time at that time that is left over. If there are really TP entities outside space, Definition 14.3 fails *tout court*.[9]

[7] In this chapter, I will focus on *proper* temporal parts. In order to get improper temporal parts, it suffices to add the identity case by disjunction (i.e. x is an improper part of y iff x is a proper part of y or x is identical to y).

[8] Because of the significant formal similarities between the spatial and temporal location, I will keep a similar symbol for both. In any case, it is important to recognize the difference between the binary predicate introduced here (temporal location) and the triadic predicate introduced before (spatial location at a time).

[9] There is a second criticism that has been moved against Definition 14.3. The idea is that Definition 14.3 captures also tropes for shapes of objects, which are intuitively not temporal parts (Sider 2001, p. 59).

14.4 Weak Co-Location

The original aim of the spatial requirement is to exclude synchronic parts from being temporal parts. However in some cases this exclusion is superfluous, because there are no synchronic parts at all. Consider time, for example. Plainly, time does not have synchronic parts. Hence, any spatial condition is simply superfluous with time. Let us make the spatial condition irrelevant for entities outside time, and run tests on the definitions we obtain.

In the first place, let us forget about function *l*, and go back to the triadic predicate @. The idea is that *if* an entity is located at place *l* at a time *t,* then its temporal part at *t* must also be located at *l*. In this way, entities outside space trivially fulfil the condition.

Definition 14.4 W(x, y, t) (x and y are weakly spatially co-located at t)

$$\mathrm{W}(x,y,t) \coloneqq \forall 1\big(y,t@1 \leftrightarrow x,t@1\big)$$

The temporally extended counterpart would be $\forall t(t \ll \mathrm{T} \rightarrow \forall l(y, t@l \leftrightarrow x, t@l))$.

The definition of 'temporal part' changes consequently. Within this framework, temporal parts are parts located at the same place as their wholes, if the wholes are located at all.

Definition 14.5 W-TP(x, y, t) (x is a W-temporal part of y at t)

$$\mathrm{W-TP}(x,y,t) \coloneqq x \ll y \wedge x@t \wedge \forall 1\big(y,t@1 \leftrightarrow x,t@1\big)$$

The temporally extended counterpart would be

$$x \ll y \wedge x@\mathrm{T} \wedge \forall t(t \ll \mathrm{T} \rightarrow \forall l(\mathrm{y},t@l \leftrightarrow x,t@l).$$

Here are two systems in which Definition 14.5 fails.

S2: thick TP entities outside space
S2 contains an entity y such that
(1) y is a TP entity.
(2) y is outside space.
(3) y is thick.

Does Definition 14.5 fail in S2? Let x be a synchronic part of y (by (3)), and thus not a temporal part of y. Since x is a synchronic part of y, x is a part of y and exists at some time t (Definition 14.1). Moreover, by (2) we know that y is outside space,

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Nevertheless, according to a plausible principle about parthood, if x is a part of y, then x and y are entities of the same sort. If this is the case, then a trope for shape cannot be, strictly speaking, a part of an object, and therefore does not satisfy the first conjunct of Definition 14.3. The present rejection of this second criticism relies on the assumption that tropes are not objects and objects are not tropes. Whether or not this assumption is true is a question I shall not consider here.

and consequently *x* is as well.[10] If both *x* and *y* are outside space, they are trivially weakly co-located at *t* (by Definition 14.4). Therefore, *x* fulfils all conditions of Definition 14.5, and counts as a temporal part of *y*, *contra hypothesi*. Definition 14.5 fails in S2, because it captures entities that are not temporal parts in S2.

Are there thick TP entities outside space? I will not consider cases of perduring objects outside space. We already said that time is thin. What about events? In general, can events be thick? We should distinguish between coarse-grained and fine-grained conceptions of events. Roughly, coarse-grained events are usually conceived of as regions of space–time. In this case, events can be thick (because space-time seems to be divisible) but can hardly be outside space.

With fine-grained events, it is quite another story. Fine-grained events typically admit co-location, i.e. occurrence at the same place (or to the same subject) at the same time. If there are sums of co-located events, and if their members can be considered parts of them, then also fine-grained events can be thick. Examples are not necessarily bound to arbitrary sum principles because there are plausible examples of thick events. Take the case of a walk, for example. It seems to have parts, i.e. different movements occurring to the left and to the right leg.

Not only must some events be thick in order to validate System 2, these events must also be outside space. This could be an additional problem, because with events outside space we lack one way of distinguishing their parts: the difference of spatial location. In any case, if there actually are thick TP entities outside space Definition 14.5 fails *tout court*.

Let us move to a second system. I shall call 'hybrid' an entity that is partly in space and partly outside it, i.e. if it has synchronic parts that are located in space and synchronic parts that are not located in space.

S3: hybrid TP entities
S3 contains an entity *y* such that
(i) *y* is a TP entity.
(ii) *y* is hybrid.

Does Definition 14.5 fail in S3? First of all, is *y* itself spatially located (even if partially outside space)? If not, then 14.3 fails in S3 for the same reason it failed in S2: Synchronic parts of *y* that are outside space are (1) parts of *y*, (2) exist at a certain time *t* and (3) are weakly co-located with *y* at *t*. Therefore, let us assume that *y* itself is spatially located. Now, if *y* is spatially located at *t,* where is it spatially located? The only reasonable answer is that it is located where its spatial synchronic parts are, i.e. its spatial location at *t* is the spatial location of the sum of all its spatial synchronic parts at *t*.

Definition 14.6 *y*'s spatial location at *t*

$l(t, y) = l(t, \sigma z(z \ll y \ \& \ \exists l(z, t@l))$

[10] If I had to justify this implication, I would say that I cannot conceive of an entity that is both outside space and has some parts in space. And even if there were such an entity, it would have some parts outside space. In this case, consider one of these parts outside space and you will find the same problem I am outlining here.

Let *x* be this very mereological fusion. *x* is not a temporal part of *y* at *t,* because it does not incorporate the parts of *y* outside space. Nevertheless, *x* is a part of *y*, and exists at *t*. And by Definition 14.6 it is weakly co-located with *y*. Therefore, *x* fulfils all conditions of Definition 14.5 and counts as a temporal part of *y*, *contra hypothesi*. Definition 14.5 fails in S3 because it captures entities that are not temporal parts in S3.

Are there hybrid TP entities? Again, time must be excluded, because it is entirely outside space. I will give two possible examples of hybrid TP entities: a four-dimensional object and an event, i.e. Sam and his life.

Let us focus on Sam's life. (The case of Sam is analogous.) Sam's life can be seen as the sum of all the events that happened to Sam. Perhaps mental events are outside space, and Sam has a (quite intense, I think) mental life. In this case, Sam's life has parts in space and parts outside space. Moreover, it is plausible that Sam's life has a location, which is the location of the sum of all spatially located parts of Sam's life. In any case, if there actually are hybrid TP entities, Definition 14.5 fails *tout court*.

Under the assumptions of S2 and S3, I think that we can show why *any version of the spatial approach would always fail*. Consider again S2. In order to exclude the problematic cases, we need a condition that is able to make the difference between a thick TP entity outside space and its synchronic parts. But this difference has nothing to do with space. Now consider S3. In order to exclude the problematic cases, we need a condition that is able to make the difference between a hybrid TP entity and the sum of all its spatial parts. But there again, this difference has nothing to do with space. This is why no alternative versions of a spatial condition could ever work.

14.5 Conclusion

In § 3, I concluded that under the ontological assumptions of S1, S2 and S3, the spatial approach is doomed to fail. And, as shown, S1–S3 are anything but ontologically cheap.

At any rate, suppose that a philosopher *x* does not accept the ontological assumptions of S1–3. What conclusions should *x* draw from my discussion? In my opinion, if *x* has another definition that works in all the systems in which 14.5 works, but also in S1–3, then he should prefer this alternative over Definition 14.5. And in fact, the mereological approach offers several definitions that work in any system where spatial definitions work, but also in S1–3. This point provides reasons to prefer the mereological approach over the spatial one.

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Chapter 15
Internal, Formal and Thin Relations

François Clementz

Abstract One of Kevin Mulligan's major contributions to the philosophy of relations is his ingenious distinction between thin and thick relations—or, more accurately, between "thin" and "thick" relational *predicates*. Mulligan's own view is that true relational thick predications do not need genuinely thick relations among their truthmakers. Although I disagree with this conclusion, I propose to explore further some of the most intriguing links between his thin/thick distinction and a few other more traditional divides—such as the "internal/external" or the "formal/material" dichotomies—and I try to assess their respective metaphysical import, focussing on the ontological status of so-called grounded relations.

Keywords Thin/thick relations · Internal/external relations · Formal relations · Truthmaking · Essence

15.1 Introduction

In one of his most thought-provoking and illuminating contributions to the metaphysical study of relations, Kevin Mulligan (1988) points to the existence of what he initially describes as an "intuitive" difference between such relational predications as "Sam exemplifies happiness", "3 is greater than 2" or "orange is between red and yellow", on the one hand, and "Sam loves Mary", "Mary hits Sam" or (my own favourite example) "Lausanne is north of Geneva", on the other hand. He then suggests that there might well be a similar difference—a difference in ontological status, one would a priori expect—between the truthmakers for both kinds of statements, or propositions, and makes a compelling case, at any rate, for the philosophical importance of this rather broad distinction. Moreover, while he cautiously declines to provide any systematic account of what "thin" and "thick" relations, as he calls them, are "in general", and while he restricts himself, instead, to drawing a list of the main subcategories of the two kinds of relations involved, he nonetheless attempts to gloss the thin/thick distinction in terms of several other dichotomies, such as the internal/external, formal/material and topic-neutral/topic-partial divides.

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However, a major difficulty in this respect is that such predicates as "internal" (respectively "formal") or "external" (respectively "material"), at least when applied to relations, are notoriously ambiguous, so that it remains pretty unclear in the end how the distinctions in question actually stand to each other.

This chapter, actually, should not be read as a piece of scholarship about Mulligan's paper. It only aims at exploring some possible implications of his thin/thick distinction, as far as the respective ontological status of various categories of so-called internal relations is concerned. I hope that Kevin will forgive me for trying to make free use of (part of) his own philosophical material in order to bring some light into the perennial issue of whether some categories of relations, as opposed to some others, should be credited with a lesser right to ontological citizenship—and, moreover, for doing so from an metaphysical point of view with which he is most likely to utterly disagree.

My aim, at all events, is fourfold. First, I propose to briefly revisit the canonical, albeit ambivalent, divide between "internal" and "external" relations. Second, I focus on the metaphysical dispute about so-called grounded relations, such as resemblance, "relations of comparison" and the like. Third, I attempt to unpack a step further the "thin/thick" metaphor by examining different, alternative ways in which Mulligan's useful distinction might be related to other distinctions in the vicinity. Finally, with the particular case of resemblance and comparative relations in mind, I discuss and try to qualify Mulligan's—admittedly "tentative"—claim that, whereas there are irreducible "thick" relational propositions, genuine (or, say, "thick") relations do not feature among their truthmakers.

15.2 Internal Relations: A Longish Terminological Caveat

Analytic philosophy, properly speaking, was born a little more than a century ago, when Russell and Moore launched their celebrated attack against the British Idealists and, particularly, against Bradley's neo-Hegelian brand of metaphysical monism. Russell's—and, to a lesser degree, Moore's—main target in this respect was the so-called doctrine of internal relations. Although Russell's canonical refutation of what he took to be the logico-linguistic source and backbone of the long prevailing hostility towards relations has now become part and parcel of the basic cultural *bagage* of every analytic philosopher, some doubts have been recently raised as to its true metaphysical import. In addition, more than 100 years later, and despite the existence of an ever-growing academic literature dedicated to this single subject, it remains somewhat unclear what was meant, on both sides, by an "internal" relation.

"Internal" and "external", indeed, are no less metaphorical adjectives in this context than "thin" and "thick" themselves. To go straight to the point, the original idea behind the whole dispute is that an internal relation is one which obtains in virtue of the "nature" of its terms. Should we, however, understand the latter term as including in its extension all the "intrinsic" properties—whether essential or not—of each relatum at time *t,* or should we, instead, limit ourselves to those among its (monadic

or relational) properties which may be taken as part of its very "essence" in the strictest sense of the word? At any rate, we are left with two main possible, and quite different, readings of the "internal" metaphor, one according to which an internal relation *flows from* (or is entailed by) the nature of the *relata* as well as quite another interpretation according to which, on the contrary, it is itself responsible for what the *relata* are. For Russell (1924, p. 335), the idealist "axiom" of internal relations meant "primarily" that every relational proposition is logically equivalent to one or more subject–predicate propositions. But, elsewhere, Russell takes the axiom to claim that every relation "is *grounded* in the nature of the related terms" (1910, p. 139). And, in yet other passages, he suggests that the very doctrine he is fighting—or, at least, one of the main (alleged) arguments in its favour—is that according to which, given that *a* and *b* are actually related by *R,* necessarily, were *c* and *d* not to be thus related, then (*c, b*) could not be identical with (*a, b*), a doctrine which there is indeed every reason to regard as lying at the heart of the British idealist's view of the matter, and which was to become shortly, at any rate, Wittgenstein's and Moore's influential interpretation of the dogma in question. Russell himself, in fact, did not pay much attention to the difference between these two last doctrines, since his own view was that both of them are expressions of "the assumption that every proposition has one subject and one predicate" (*op.cit.,* 142) and, in both cases, lead to the conclusion that "there are no relations at all" (ibid).

Be that as it may, the fact remains that, by an "internal" relation, you could mean—and that has actually been meant—either a relation which is founded on the genuinely monadic (i.e. non-relational) properties of its terms or a relation which is, in some way or the other, critical to the identity of at least one of the terms. Now, clearly, the two concepts are not identical, as Moore (1922; see also Campbell 1990) famously remarked, since the mere fact that a relation is somehow "anchored" in the nature of its terms does not entail that it is essential to any one of them—this depending further on whether the underlying properties belong to the *relata,* themselves, essentially or contingently—and since it is at least conceivable, on the other hand, that a relation might be essential at least to one of its *relata* and, yet, not supervene on any monadic foundation.

Just by crossing, then, these two distinct and independent divides (grounded/ungrounded, essential/contingent), it would seem that we can arrive to a fourfold classification—some kind of "*ontological square*" applied to relations, as far as the internal/external distinction in its broadest sense is concerned:

1. Grounded, though contingent, relations (e.g. Barack Obama being taller than Angela Merkel, my shoes being brighter than yours)
2. Grounded essential relations, such as those arguably denoted by the following statements: "Socrates belongs to the same species as Plato", "this proton is more massive than that electron" (an example taken from Simons 2010)
3. Essential, while ungrounded (or "directly constitutive"), relations. Putative examples: structural relations among numbers, semantic contents, etc.; relations between humans qua social beings, and so forth

4. External, i.e. both ungrounded and contingent, relations (putative examples: spatial distance between ordinary material bodies; temporal relations)

Even though this kind of classification *perforce* implies some degree of simplification, I am inclined to think that subcategories (1) to (3), taken altogether, subsume all the main kinds of relations that the previous century's philosophers had primarily in mind when talking about "internal" relations. Lately, however, a growing number of metaphysicians have been prone to define an internal relation as one that fits above all Moore's (or Wittgenstein's) characterization. According to what I shall call, therefore, the "standard" definition of an internal relation, a given relation *R(a, b)* is internal if and only if:

(*IR*) *R (a, b)* (necessarily, if *a* and *b* exist, then *R (a, b)* exists).

Although it is almost beyond doubt that this definition was originally devised in order to apply primarily to "essential" relations (i.e. subcategories (2) and (3) above), it can easily cover all kinds of internal relations sensu lato, provided that *a* and *b* are taken with all their suitable properties, at least at some given time (or, to put it in Armstrong's terms, as "thick" particulars). Yet, as it has become more and more common, these days, to narrow the extension of the phrase "internal" relation to those relations that *strictly* fall under the "standard definition" given above, and as Mulligan himself, moreover, endorses this definition with, quite plainly, *essential* relations in mind, in the remainder of this chapter I shall comply by this restrictive use of the phrase in question as applying, primarily, to relations which hold, of necessity, given the very existence of the *relata*.

A further terminological caveat: In some earlier writings, I also sometimes called grounded-albeit-contingent relations and essential relations (in general), respectively, "weakly internal" and "strongly internal". Recently, however, Ingvar Johansson has made use of those same expressions, quite differently, in connection with what looks to me as being, roughly, the two main kinds of "essential" relations I just distinguished (i.e. grounded essential relations on the one hand, "directly constitutive" relations on the other hand). As I shall be led to refer to Johansson's own views on these matters—and despite the fact that his (and Mulligans's as well as others') terminology have the prima facie odd consequence that your brother's superiority in matter of size over his youngest child should be regarded, by that token, as utterly "external" to them, I shall follow him on this score hereafter for the sake of clarity.

Notice, however, that *IR,* as it stands, does not permit to account for the difference, among internal relations sensu stricto, between those which obtain due to some essential monadic properties of their relata (and which are thus "weakly internal" relations, in Johansson's terms) and those which are somehow constitutive of their terms (and are, then, "strongly internal" relations). Nevertheless, following Johansson's own suggestion, I take it that the needed distinction can be accounted for by completing the right side of the biconditional *IR* as follows: "and if *a* cannot exist if *b* does not exist, and vice versa" (*strongly* internal relations), or, on the contrary, "and if *a* and *b* can exist independently of each other" (*weakly* internal relations).

A final remark on this issue of the definition of internal relation, about the possible significance of the distinctions I have just made: Grounded relations, be

they contingent or essential, are relations which depend upon, and are entailed by, the existence (and that of some of the monadic properties) of their terms. They may be said, thus, to *issue* from the nature of the terms: hence the widespread view, to be discussed below, that they have no being of their own, over and above their monadic foundations. But, with what I call "directly constitutive" relations, it might seem to be quite the reverse: The *relata,* this time, depend on the relation itself for their existence, insofar as it is constitutive *of* their very nature. Suppose, for example, that the nature of an entity is entirely determined by its (actual or potential) relations to other similar entities within the same domain—like integers on some view of arithmetics, or like mental meanings according to some functionalist accounts of intentional content—so that it might be said, with some plausibility, that the being of the "entity" in question is not really distinct from that of the whole network of its actual, as well as virtual, relations taken altogether. In view of the symmetry of identity, are we not led, in both cases, to the same result, i.e. to some form or the other of relations/*relata* identity theory? It might well seem so, from a purely formal standpoint. Yet, from a metaphysical point of view, it looks pretty clear to me that, in the former case, we would be inclined to grant first-class ontological status to the *relata* (along with all their relevant monadic properties), while in the latter case, we would award some kind of ontological priority, on the contrary, to the relations themselves. There might well be a fundamental difference, here, insofar as the order of metaphysical *explanation* is concerned, although we might also choose to give priority in both cases—as more or less suggested by Russell himself in his latest writings—to relational "complexes" or "structures".

15.3 Grounded Relations, Supervenience and Truthmaking

Bearing all these formal distinctions and terminological caveats in mind, I now turn to the ontological status of so-called grounded relations in order to provide a rough outline of the philosophical perspective from which I shall later approach the multifarious relationships between those distinctions and Mulligan's thin/thick divide.

Most philosophers would now agree with Russell that relational propositions or statements are not, as a rule, reducible to non-relational ones. Yet, unlike Russell, many of them take it that *some* classes of relations—including, of course, so-called comparative relations—are *grounded* in the monadic properties of their *relata*. And they also usually take it that such relations are, for that very reason, no ontic addition to their terms (a view that had been anticipated by those, among the Scholastics, who argued that a "relative accident" was not really distinct from its "absolute" foundation). Some writers, such as Keith Campbell, have also sought to extend this claim to other categories of relations, which were more traditionally regarded as external, including causal, spatial and temporal relations. But I shall leave this further issue aside and concentrate, in this chapter, on less disputed cases of supervenient relations.

What, then, about the most popular view that grounded relations reduce, so to say, to their monadic foundations? Comparative relations (and resemblance) are clearly, indeed, the most prima facie obvious candidates for this particular form of deflationist treatment. They both provide something like a paradigm for "founded" relations in general and constitute, on the face of it, a realm par excellence to which one would seem to have a good reason to apply J. Kim's concept of *strong* supervenience. One might yet wonder to what extent this really implies that the relations involved are reducible to their monadic foundations. On the face of it, this should not raise any doubt. If Socrates is 1.80 m, for instance, and Thaetetus, say, 1.78 m, and if this clearly appears to *suffice* to make it true that the former is taller than the latter, does it not seem prima facie plausible that the whole reality of the relation *taller than,* as it holds between them, just *consists* in the two men having the respective tallness they actually have? After all, as Campbell (1990, p. 103) puts it, "if God makes an island A with so much rock, soil, etc., as to amount to 20 ha, and subsequently, an island B of 15 ha extent, there is *nothing more* needing to be done to make A larger than B" (ibid).

If the truth must be told, I used to accept this claim myself not so long ago. But I am now inclined to think that it is saddled with difficulties. As I have recently addressed this issue at some length elsewhere (Clementz 2008; Clementz 2014), let me just briefly mention two of them.

A first objection, of course, is that, if the relation *larger than* which obtains between islands *A* and *B* (in that order) indeed supervenes upon the respective extent of the two islands, as it certainly does, this is only in virtue of a further relation—a *greater than* relation, say—holding between their extents themselves. Now, a natural suggestion is that, if the extent of *A* is greater than the extent of *B,* in the example above, this is only in virtue of the *greater than* relation holding of numbers 20 and 15. Most obviously, then, the friend of reductive foundationism will have to provide appropriate monadic foundations for *this* further relation—but, since those foundations should be such as to account for the asymmetrical character of the relation, she would seem to be faced with the very same sort of endless *regress* that Russell famously objected, in *The Principles of Mathematics* (§§ 213–214; see also *Philosophical Essays,* 144) to the "monadistic" variety of the "dogma of internal relations". In his book *Abstract Particulars* (102–103), Campbell tried to meet this objection, but his answer remains somewhat unclear—wavering, as it were, between the claim that the regress, actually, is harmless, and the suggestion that the problem does not even raise from the start (or, at all events, that the regress terminates at a very early strep). Campbell first argues that Russell's regress, while it might be fatal to the kind of reductive (or eliminative) analysis of relational *propositions* that Russell himself had in mind—since it would imply that no relational proposition, or sentence, has a finite specifiable meaning—is actually harmless for his own view, which only holds that grounded relations supervene upon, and thus are nothing over and above, their monadic foundations. In the latter case, Russell's regress is not of the vicious kind, since "at each step in the regress, the asymmetric relation between the foundations will become more abstract", and since "regresses of successively more abstract items, ever if non-terminating, are harmless" (103–104). As for my-

self, however, I cannot think of any good reason why, just from the fact that some relation *R* is highly "abstract"—whatever this actually means—we should draw the conclusion that *R* does not really exist (or "subsist", or whatever) as a relation. On the other hand, Campbell also contends that the larger size of 20, when compared with 15, ought to be attributed to some "monadic" characters of these numbers in the end: His idea, now, is that *20 is greater than 15* just means that 20 includes 15 as a subset or as a proper part, and that *this* is a *unilateral* relational property, with its foundation in the nature of 20 alone. The reason for this, according to him, is as follows: "If A has a part B, then *just because B is a part of A,* there is in *A* (*which includes B*), the sufficient ground for the relation" (105; my emphasis). But this, I contend, is just a question-begging argument as, were we to grant that the relation which the pseudo-monadic predicate "having *x* as a proper part" actually harbours has a foundation in *A* alone, this foundation is certainly not a (genuine) "monadic" predicable: In fact, it is clearly (cf. "*just because B is a part of A*") this very relation itself! Notice, in this regard, that an alternative solution would be to endorse some kind of mathematical structuralism, holding that the nature and identity of any integer are wholly determined by the entire network of all the arithmetical relations it entertains with every other number. But notice also that relations such as *A is greater than B* would then supervene both on the respective size or volume of *A* and *B,* taken jointly, and on the *greater-than* relation between the magnitudes in question, understood as (directly) *constitutive* of the being of the numbers involved—and thus, arguably, as an *irreducible* relation.

Besides, we should not stick to the only case of relations within the category of quantity strictly speaking. What about those in the category of *quality,* such as relations of contrast or resemblance between colours, for instance? Suppose that this wall is clearer than that one (the former is yellow, say, the latter brown). The asymmetric character of this relation also seems to point towards the asymmetry of the relation between the two colours taken by themselves. Now, it is widely thought that the relation *clearer than* is one among various internal relations between (phenomenal) colours. However, two competing views seem to be on offer. One is that these internal relations depend upon some *non-relational* properties of the colours involved. But then, since we have to account for the asymmetrical nature of the relation *clearer than* anyway, we are left with just two possibilities: Either the asymmetry must be considered as an irreducible (emergent rather than properly supervenient) feature, just resulting from the co-instantiation of the non-relational properties in question—which would obviously be bad news for the friend of reductionism—or we try to account for it by postulating further underlying non-relational properties, on pains of engaging into a likely endless regress. According to the second view, which I would tend to prefer anyway, internal relations between colours are, in fact, at least in part (directly) constitutive of their relata, but, in that case, we are led to roughly the same conclusion as above.

Be that as it may, the main objection, perhaps, to reductive foundationism is that it looks either as a plain contradiction or as some kind of philosophical "double-talk" (Lowe 2014) to claim both that grounded relations somehow really "exist" and that they do not enjoy any being of their own. Of course, the objection has to

do with the "ontological free lunch" more generally. As H. Hochberg (2004) puts it, "…In rigorous ontology, nothing is free—if it is a 'pseudo-entity', then one should not talk about it or not employ it in one's analysis". In view of these difficulties, it should not come as a surprise that quite a few philosophers, lately, among those who believe that either internal relations or relations in general are "ontologically recessive", have chosen a more radical approach, preferring to argue that such relations, in the end, do not really exist and basing this claim, not upon the supervenience-free lunch strategy but, rather, upon a more direct appeal to the truthmaking principle. Armstrong himself, of course, already made use of the latter in connection with what he calls "internal" relations, but together with the supervenience strategy, and his conclusion that unveiling the actual truthmakers for grounded relations leads to a "deflationary" view of their ontological status smacks more of reduction than of sheer elimination. The next generation, however, is more radical. By its lights, you should not even say that internal relations "supervene" on their monadic foundations. The end of the matter is that there are *no* internal relations (both in the narrow and in the wide sense of the phrase) fundamentally—to quote Peter Simons (2010), there are just "internally true" relational truthbearers—and, that most probably, there are no external relations either.

According to the New Eliminativists, as we might call them, such a truthbearer as expressed by "Socrates is taller than Thaetetus", if true, is just made true by Socrates and Thaetetus themselves having the sizes they actually have. There is no need for any additional "relational truthmaker", i.e. for a further entity (a relational trope, or universal instance, or state affairs), to account for its truth. But *why* is it so? The idea, it would seem, is that it is just in virtue of the "essence" of the primary terms of the target relation, i.e. of the "essence" of the relevant underlying monadic properties involved on both parts, that this proposition is true. So far so good, but, to push the question a step further, *why* is the mere conjunction of the (monadic) facts that Socrates is 1.80 m high and Thaetetus is 1.78 m such as to entail the truth of "Socrates is taller than Thaetetus"? An obvious, though presumably "naive", answer is that this is simply because Socrates' size *is* greater than Thaetetus, but it is unlikely that the friends of the truthmaking branch of anti-realism concerning relations will want to hear of this. The stubborn fact remains, nonetheless, that it is indeed hard to understand how these two monadic, supposedly independent, facts could jointly make it true, just by themselves, that Socrates is taller than Thaetetus. Once more, this is not to deny that the mere conjunction of the two monadic states of affairs indeed suffice to entail the truth of our target proposition. The issue I wish to raise has to do with the real bearing of this plain fact in terms of metaphysical explanation. Of course, it might be objected at this stage that, in metaphysics as elsewhere, explanation has to stop at some place and that we cannot do, anyway, without metaphysical "primitive facts". This should certainly be agreed, but then why not allow for (genuine) relational truthmakers among primitives metaphysical posits, include so-called internal relations among them and duly acknowledge that we are none the worse for it? As remarked by Fraser Macbride (2011), it looks in fact as if the friends of the truthmaking brand of eliminativism have already contracted into the "essence" of the relata all that is actually needed in order for the

relevant propositions to be true—or, in other words, as if they have already encapsulated within both Socrates' and Thaetetus' actual sizes the ground for making it true that the former is taller than the latter, namely this very relation itself.

This should deserve a much longer discussion, of course. However, my (tentative) conclusion, at this stage, is that grounded relations or at least comparative relations, such as *larger than, brighter than* and so forth, cannot be reduced or eliminated. At best, such relations may be said to supervene both on such properties *and* on some further, more fundamental, irreducible relation holding between those monadic properties. Unless, of course, we should prefer to say that they indeed supervene upon their monadic foundations, but that they do so *in virtue of* an internal relation between the intrinsic properties in question.

However, this does not suffice, yet, to refute the widespread view that comparative and other grounded relations of the kind we have been considering so far enjoy only some form of "second-class" reality. What is supposed to be so "special" with grounded relations that they are thus widely viewed as lacking, as it were, full metaphysical weight? Clearly, this should depend on the ontological status of the further relationship the existence and irreducibility of which we just acknowledged.

15.4 Of Some Main Varieties of Thinness

Maybe this is where we could try to make use of Mulligan's distinction between what—borrowing from the lexicon of contemporary moral philosophy—he calls "thin" and "thick" relations. In his brilliant 1998 paper, Mulligan first generalizes the thin/thick distinction to predicates or concepts in general, beginning with monadic predications. Rightly enough, he calls attention to the existence of a difference in nature between such monadic statements as "Sam is happy", "Sam is a man", on the one hand, and "Sam is an object" on the other hand. According to him, there is a no less intuitive difference between such relational predications as "Orange is between red and yellow", "4 is greater than 2", and, by contrast, "Romeo loves Juliet", "Juliet hits Romeo" and "Paris is north of Marseille". He then draws a list of "thin" and "thick" relational predicates. While the former could virtually include a quasi-infinity of terms which may, however, be subsumed under a finite number of (sub)categories, the latter is only comprised of a small number of concepts such as *identity, resemblance, exemplification, inherence* or *dependence* but also, e.g. the predicate "greater than". If we could immediately infer from the (putative) logical structure of language to the ontological structure of the world, we might as well immediately conclude to the metaphysical ultimate reality of both thin and thick *relations*. However, most metaphysicians nowadays have become wary of this kind of inference, so that the issue remains wide open. As a matter of fact, Mulligan's own claim is that, whenever some truthbearer featuring a thick relational predicate is true, its actual truthmaker just includes, beyond whatever intrinsic properties involved, a *thin* relation. In other words, while there are "irreducibly relational predications involving "thick" concepts" (27)—something we should clearly thank

Russell for having established—there are, *pace* Russell himself, no thick relational entities to serve as truthmakers for them. Rather, "the relevant truthmakers are only thin relations and monadic tropes or properties of their bearers" (ibid). More precisely, and as Mulligan himself is a well-known friend of tropes, the truthmaker for such sentences/propositions as "*a* is happier than *b*", "*a* is taller than *b*" and so forth—when *a* and *b* are, let us say, two distinct concrete particulars such as Socrates and Simmias—is comprised of, e.g. Socrates' happiness (or size, etc.), of Simmias' own particular happiness (or tallness, etc.) as well as of a "thin" *greater than* relation between those two monadic tropes (*plus,* as Mulligan conceives of this relation itself as a trope, some dependence relation between the relation and the pair *a* and *b*).

Mulligan's suggestion certainly looks like a much welcome attempt to answer (inter alia) the question we have raised about the special ontological status of grounded relations. At first sight, it seems to steer midway between the pre-Russellian view that relations should not feature among the ultimate atoms of being, as they are reducible to monadic properties, and the post-Russellian lazy inference according to which, since polyadic predications cannot be thus paraphrased away, relations themselves—relations in general—are to be counted among the prominent items of what Russell himself called the "basic furniture of the word". Not only does Mulligan (rightly) take for granted the overall soundness of Russell's canonical objections to both "monadistic" and "monistic" purported logico-linguistic reductive analysis of relational statements, but on p. 326, he goes so far as to claim that "there *are,* of course, irreducibly relational entities". Yet, towards the end of his paper, Mulligan considers with evident sympathy the view that the relevant "thin" predications which are supposed to "translate", or account for, the seemingly "thick" ones have no real relational truthmaker in the end (e.g. the truthmaker for "*f* is greater than *g*", when *f* and *g* are two monadic tropes, is just *f* and *g*) and is lucid enough to ask whether this is not, eventually, the nearest highway back to the good old Bradleyan view that all relations are internal and, by way of (alleged) consequence, either unreal or, to say the least, metaphysically non-fundamental.

But *what,* anyway, is a "thin" relation? As it is commonly used by moral philosophers, the distinction between "thin" and "thick" moral concepts and/or predicates lies between those which are supposed to refer to such *general* evaluative notions as "good" or "bad", and, on the other hand, those that are meant to denote more *specific* moral properties, like kindness, honesty, cruelty or selfishness. Now, most examples of "thin" relational concepts would seem to display a high degree of generality indeed. But, surely, Mulligan's own distinction cannot be as simple as that. While he declines to provide any systematic account of "what thin *versus* thick relations (or concepts) are in general" (327)—preferring, instead, to proceed by way of enumeration—Mulligan nonetheless endeavours to bring some light into this matter by way of comparison with three other prima facie close distinctions in the vicinity: topic-neutral/topic-partial, formal/material and internal/external relations. To begin with, should we characterize thin relations as "topic-neutral", in Ryle's sense? Mulligan's main objection is that there does not seem to be an "absolute" divide among topic-neutral concepts and those that are "partial" to their topic (which, incidentally,

seems to indicate that, in his view the distinction between thin and thick relations should be "absolute", or in other words that it does not allow for various "degrees" of thinness). Admittedly, some thin relational concepts, in particular, would seem to enjoy only limited neutrality: Entailment and (non inductive) justification, for instance, "can connect propositions of all types but not tables" (ibid), whereas it might be claimed that ontological (existential) dependence relates only temporal items, or that parthood does not apply to abstract entities.

Should we equate thin concepts with *formal* concepts, instead? The problem, this time, is that it is far from clear what such terms as "formal" and "material" are supposed to mean. Mulligan briefly considers three possible readings of the formal/material discussion: formal concepts as applying to what is *not perceptible,* material concepts to what is perceptible; material concepts as standing, unlike formal concepts, in *genus/species* or *determinable/determinate* relations and formal concepts, but not material concepts, as having a *logic*. None of them, in his view, provides an entirely satisfactory gloss of the thin/thick divide.

Finally, then, it looks as if, although the thin–thick distinction clearly overlaps, in part, with both the topic-neutral/topic-partial and the formal/material distinctions, it does not *coincide* with any of them, so that they do not shed that much light upon it in the end. This, however, would not worry too much Mulligan himself, who claims that his view according to which true thick relational sentences have thin relations as their (sole) truthmakers does not require an overall account of the thin/thick divide, but only a satisfactory account of those thin relations that are involved in the development of this view—namely, *identity, resemblance, greater than/lesser than, dependence* and *justification*. What really matters, in the end, is that all the thin relations appealed to in this respect are *internal* relations. Indeed, "to say of these relational predicates that their semantic values are thin relations *is to say* that these values are, one and all, internal relations" (my emphasis). But, now, since the remaining thin relations can be construed out of such or such relation(s) in this shortlist, it looks as if *all* thin relations are internal. Furthermore, Mulligan appears to hold that external relations (*if,* that is, such relations were to be admitted) would have to be thick. Of course, this, in itself, does not preclude the logical possibility that there also are *thick internal* relations—as remarked by Johansson, who builds on this idea in his recent discussion of Mulligan's account of those issues (this volume). Yet, there is some reason to think that Mulligan's own view is that the distinction between thin and thick relations coincide with the internal/external distinction.

So far, so good. Recall, however, that our initial move was to turn towards Mulligan's thin/thick metaphorical distinction, hoping that it might help us to elicit the intuition behind the popular deflationary view of both internal and grounded relations. Since Mulligan clearly endorses the standard definition of an internal relation as one the holding of which is necessitated by the very existence of its terms, it seems that we are, in fact, just taken back to where we started. But this, of course, would be a much too hasty response. Maybe we should rather try to take further advantage of Mulligan's suggestion and explore further the connection between the thin/thick dichotomy and a few other divides he scrutinizes, in order to distinguish between—and compare—different varieties of so-called internal relations.

This goes especially for the formal/material distinction. It is rather surprising that, when briefly assaying this most ambiguous philosophical *topos* for philosophers, Mulligan hardly takes into account—except, indirectly, *via* a short quotation from Geach—one of the most common readings, nowadays, of the predicates "formal" and "material". What I have in mind, of course, is the popular interpretation according to which a formal relation is one which applies across all categories of beings (such relations, incidentally, being *really* "topic-neutral"). Formal relations, so understood, would stand to material relations as "transcendental" relations, in the days of Medieval philosophy, stood to "categorical" relations.

Now, it is widely agreed—and, as far as I can see, quite beyond dispute—that formal relations are internal to their terms. One major argument in favour of this view is that internal relations are traditionally considered as not featuring among the genuinely fundamental elements of being. And one most common motive behind such a claim is that it, alone, can block from the start a whole series of ill-famed regresses—such as Russell's famous anti-nominalist regress argument about resemblance, Bradley's regress about relations or, more generally, the so-called paradox of exemplification. However, if we do not wish to see this appear as an ad hoc solution, or as some form of wishful philosophical thinking, surely we need some *independent* ground for both the view that formal relations are internal and the further conclusion that "formal" relational truths do not require genuinely relational truthmakers.

Let us begin with the former claim. The usual argument, here, is that formal relations fall under the "standard" definition of an internal relation insofar as they obtain in virtue of the *essence* of their relata (or, in more cautious words, that formal truths—including formal *relational* truths—are essential truths). About this, I fully agree: Plainly enough, formal relations are essential, and therefore internal, relations. However, I am inclined to think that the topography, hereabout, is slightly more complex, that there are quite different ways in which things might be related in virtue of their "essence", that we can find such differences between formal and non-formal internal relations as well as among formal relations themselves and finally that these differences directly bear upon the issue whether the various relations in question should be taken with any metaphysical seriousness at all.

So, let us look at it in more detail. There is no doubt whatsoever that formal relations obtain in virtue of the "essence" of their relata. The obvious reason, for example, why it is true that Marylin Monroe is identical with Norman Jean Baker is that it is, as Lowe (2014) puts it, "of the essence" of Marylin Monroe to *be* Norman Jean Baker. Or suppose that you do not only subscribe to immanent realism about universals but that you also accept (*contra* Armstrong) that universals have instances: Although this tomato might have been of a different colour (after all, there are also green and yellow tomatoes), it is of the essence of its actual colour, as it stands, to be an instance of redness. (*Exemplification* is a more complicated case, since it is obviously a contingent fact that the tomato itself is the colour it is—even though, given that it actually *is* the colour in question, it is of the essence of its particular colour-instance to be both an instance of the universal *redness* and an individual accident (or mode, or whatever) of *this* particular tomato. To that extent, we might

say—still following Lowe—that exemplification is not a *purely* "formal" relation). Or consider existential *dependence:* if *A* ontologically depends on *B,* then, trivially, had *B* not existed, either *A* would not have existed, as it were, or it would not be the very entity that it is actually: After all, this is all what it means to be ontologically dependent! In this more or less Pickwickian sense, it is clearly "of the essence" of *A* to depend on *B*.

Now, on the face of it, this would seem to justify the view that this subcategory, at least, of "thin" (and therefore internal) relations which is comprised of *formal* relations is ontologically uncommitting indeed—or, in other words, that there are formal relational truths, no doubt, but no formal *relations* in the end. Indeed, it might be held that Marylin Monroe (or, for that matter, Norman Jean Baker) provides a sufficient truthmaker for the assertion that the former is identical with the latter. Or that the particular redness of this tomato suffices to account for the truth of "the colour of this tomato instantiates redness". One might push this line of thought a step further and claim, with Lowe himself (*op.cit*), that formal truths do not even need any truthmaker whatsoever, since they are essential truths and since essences are not entities, but just what the various entities they are the essence thereof simply *are*.

However, I have already said that the overall issue looks actually somewhat more complicated to me. There are important differences among internal relations themselves in this respect. *Some* formal relations are clearly so "thin", indeed, that they might said to be metaphysically "diaphanous". Although this is of course a much disputed matter, *identity,* for instance, clearly looks like a pseudo-relation, due to the fact that if "$A=B$" happens to be true, *A* and *B* are not distinct entities. Or consider *instantiation*. Suppose that *a* exemplifies some monadic property *F* and that we have, therefore, the property-instance *p*. It may be purely contingent that *a* exemplifies *F,* but given that it does, *p* exists and, of course, *p* is *essentially* an instance of *F*. However, not only is it *of* the essence of *p* that it instantiates *F*—as it is also part of the essence of *p* to be instantiated by *a*—but that it is an instance of *F* in fact *is* its very essence (or, say, one "half" of its essence). Now, I take it that we should follow Aristotle, indeed, in thinking that an entity and its essence are not distinct entities (or, equivalently, that essences are not entities)—since, otherwise, a given entity's (or "substance") essence would need its own essence-*qua*-entity, and so forth, so that we would have to account, each time, for the relationship between those further entities, on pains of an obvious instance of endless regress. Once more, we do not have two really distinct items which would need to be "related". This should certainly count as a good reason to refuse to regard either identity or instantiation as being genuine relational entities.

However, I am not sure that the same line of thought could apply to *all* formal relations. Take, for instance, *existential dependence*. To put it in a nutshell: Beyond the somewhat peculiar example of the obvious ontological dependence of particularized properties upon their bearers, I concur with Lowe (1998, p. 143), once again, in wondering why the very fact that some given entity depends on some other entity for its existence and identity (or even, for that matter, that they existentially depend upon each other) should entail that they are one and the same metaphysical item. After all, a major example of ontological dependence, within Medieval philosophy,

was that of every creature towards God—a "transcendental" relation which most obviously does *not* imply that its *relata* are not, for that reason, what Hume would have called "distinct existences". But what is supposed to be the ground, then, for excluding existential dependence from the ranks of *genuine* relations, if not the well-known Scholastic dictum that one necessary condition, for any relation, in order to be counted as a "real" relation, is that the *relata* should be both real, themselves, and really *distinct*? Could such a drastic claim be defended on the sole basis of the fact—provided it *is* a fact—that a statement like "*A* ontologically depends on *B*" does not require any further truthmaker beyond *A* itself? Or should we content ourselves with the no less popular, but rather vague, suggestion that "formal" properties and relations, in general, are not part of the "alphabet" of the world", but pertain, so to speak, to its "syntax"—or, in other words, that they do not feature among the ultimate *constituents* of reality but are in part responsible, instead, for its overall ontological *structure*? This is an issue which I shall leave, presently, as homework for the reader.

However that may be, the contrast between "formal" relations (in general) on the one hand and resemblance or comparative relations on the other hand is no less striking. Mulligan does not claim, of course, that the latter are formal relations. Yet, he includes them within the category of "thin" relations—a category for which he clearly elects formal relationships, at the same time, as some kind of paradigm. Now, the point is not just that comparative relations would seem to lack the high level, or degree, of generality and/or topic-neutrality which seem to be required of thin relations. The point, rather, is that even though such a relation as, for instance, *greater than* (taken as a relation between, say, heights or weights) also holds in virtue of the "essence" of its (immediate) *relata,* it does not do so in any sense which should lead us to put it on a par, ontologically speaking, with formal relations, or even to classify them, more generally, among "thin" relations sensu stricto. Maybe I should remind my reader, in the first place, of the distinction I made earlier on between two kinds of "essential" (or "internal") relations: those, on the one hand, that merely flow from essential *monadic* properties of their terms, and those, on the other hand, that are, so to say, *directly* constitutive of the very identity of their terms. Or remember Johansson's close, and arguably extensionally equivalent, distinction between "weakly" and "strongly" internal relations. Now, ontological dependence is probably the paradigmatic example of a strongly internal relation. More accurately, ontological dependence lies at the heart of the very notion of a "constitutive" or "strongly internal" relation. By contrast, *resemblance* along with *greater/lesser than* are weakly internal relations. For instance, if the colour of this tomato resembles that of your T-shirt, this is certainly an internal relation. Yet, the tomato's particular redness would have existed even if your T-shirt had been another colour: The relation, while necessitated by the essence of the two properties, is just "weakly internal".

Another, though closely akin, difference between *some* "thin" relations at least and ordinary grounded relations is as follows. Consider, for instance, such relations as, say, *the size of A is greater than the size of B*. Here again we might say, after all, that it is in virtue "of the essence" of the two sizes that the former is greater than the

latter. Maybe we could go so far as to say that it is of the essence of the size of *A,* for example, to be greater than the size of *B* (although we should be most cautious on this issue, and although it surely makes more sense if the sizes in question are taken as universal-instances, rather than tropes). But, even so, it is not, this time, as if were faced with some (pseudo) relation between an entity and its essence: What we have, rather, is a relation, which, in virtue of their essence, obtains between two *prima facie* "distinct existences".

15.5 Back to Grounded Relations

Armed with these distinctions, we can now return to the topic of ordinary resemblance or comparative relations between concrete particulars. But let us first take stock. Mulligan's main contention, it will be remembered, is that the actual truthmaker for every "thick" relational predication is but a "thin" relation in the end. Although arguing in full detail in favour of this claim would take me much beyond the scope of the present essay, I am inclined to think that this will not do, at any rate, as far as causal, spatial and temporal relations are concerned. But what, then, about grounded relations, which Mulligan regards as the "easy case"? As a matter of fact, I am quite willing to agree that such propositions as *Socrates is taller than Thaetetus,* or *your socks are the same colour as mine* are true, when true, in virtue of the existence of a thin relation—so long, that is, as by a "thin" relation is meant an *internal* relation. Indeed, it is widely agreed that every "grounded" relation between, say, two concrete individuals *a* and *b* is one that really holds in virtue of some internal relation obtaining between *a*'s and *b*'s relevant monadic properties. However, we just saw that there are, in fact, several varieties of "thin" (or, for that matter, "internal") relations and, accordingly, both various ways in which a given relation can be said to hold in virtue of the "essence" of the *relata* and thus, in the end, various degrees of (ontological) thinness. Finally, then, it is far from obvious, to say the least, that *all* so-called internal relational truths are true in virtue of the occurrence of a "thin" relation as Mulligan himself would seem to understand this term (after all, there might as well be, as Johansson puts it, "thick internal relations"). And it is still less obvious that the predications in question do not need any genuinely relational truthmaker beyond the *relata* and/or some of their monadic properties.

If so, what is supposed to be so particular, then, with grounded relations? In other words, what are we to make of the usual more or less anti-realist view of such relations as *Sam is taller than Sally,* or *Geneva is safer than Los Angeles,* as enjoying no distinctive existence over and above that of their relata-*cum*-relevant-monadic-properties—or, at all events, as not being metaphysically "fundamental"?

As far as I can see, the obvious element of truth behind this "intuition" is that resemblance and comparative relations *do* indeed supervene upon (even though they do not reduce to) their monadic foundations. Remember, however, that they actually supervene, according to me, upon the relevant monadic properties *and* upon

an irreducible internal relation between those properties (or, alternatively, that they do indeed supervene upon their monadic foundations *because* of a further "internal", more fundamental, relation between the properties in question). Incidentally, I should think that this is a view which may be more easily sustained if you would allow for universal properties (and relations), along with universal-instances, rather than in the context of trope theory. Within the former frame, the internal relation between the underlying monadic property-instances may be simply conceived of as the instantiation of a corresponding internal relation between universals. With tropes instead of universal-instances, things might be more complicated, including, it would seem, the very idea that grounded relations obtain in virtue of the "nature" of their terms. Tropes, admittedly, are supposed to have, each, a "particular nature". But tropes—or basic tropes, at least—are also supposed to be "simple", so that one might suppose that their nature is simple, too. I have some difficulty, therefore, to understand how relations could just flow from their natures, unless they are somehow "retracted to" (as D. Mertz (1996) puts it) within those natures from the start.

Be that as it may, what are we supposed to make, then, of the obviously popular view that, even though resemblance and comparative relation do not, strictly speaking, reduce to their monadic foundations, they nonetheless merely supervene upon those, so that that their own existence ought to be regarded as purely consequential? As a matter of fact, I have just held that their subvenience basis also included an internal relation between those foundations themselves, but this does not, on the face of it, makes things look much better, as it would seem to reinforce the more or less common impression that, by contrast with those relations that appear to *genuinely relate* their terms, comparative relations only somehow pertain to the nature of the relata, so that they might finally seem to hold between the properties involved on both sides rather than between the objects themselves (Kim 1993, p. 162). One other, more radical, suggestion would be that the internal relation that is supposed to hold between the relevant properties should not, just *qua* "internal", be counted, itself, among *genuine* relations.

What are we to make, then, of these two distinct suggestions, beginning with the latter? We saw above that there are two principal ways in which a relation—and this goes as well for "second-order" relations between properties as such—could be "internal" to its terms. A relation between, say, properties F and G can be said to be "internal" sensu lato if its "flows from" the nature of its terms, either by supervening upon some second-order monadic of F and G or else due to some mysterious "primitive" relationship with the very exemplification of these properties. One other possibility is that the relation should be, absent any monadic foundations, at least in part (and, thus, directly) *constitutive of* the identity of the relata. Notice that only in the latter case the relation deserves to be regarded as a "strongly internal" (in Johansson's sense), i.e. as such as their terms could not exist independently from each other.

Now, one might indeed wonder whether constitutive relations are genuinely *relational,* insofar, at least, as we take it to be a necessary condition for a relation, once again, to be a "genuine" (or "real") one that it holds of two both real and *really distinct* relata. Actually, this is another place where our intuitions might diverge. On

the one hand, as suggested above, one might be inclined to consider that such "internal" relations, far from reducing to their terms, enjoy on the contrary some kind of ontological priority over them. On the other hand, it has been often argued that, since they make their relata intimately depend of each other, they should be counted among pseudo-relations. It should be remembered at this stage that it is far from obvious that existential dependence, generally speaking, is not a "genuine relation". Perhaps, then, we should say, in the light of Hume's "distinct existences" principle, that there are no necessary connections holding either of concrete individuals or of their particularized properties. However, my guess is that there well might subsist such internal relations between universals—or, at any rate, among more or less abstract entities. But, even so, I fail to see any prima facie compelling reason why we ought regard them as just pseudo-relations. Just considering these two examples, it seems to me that the mere fact that phenomenal colours are plausibly interconnected by "internal" relations, or that the very essence of natural integers is, for the most part, a function from their arithmetic interrelations, does not stop red from being quite a different colour from yellow, or 8 and 24, for instance, from being two really distinct numbers. But, even if I were to be wrong on this score, what matters is that, if concrete particulars *A* and *B* are such that the former is taller (or clearer) than the latter in virtue of their respective size (or colour), *this* is, most often, a purely contingent fact, so that the relation appears to hold, this time, between two really distinct entities: There is no reason, at least in this respect, to maintain that it does not "really", or genuinely, relate its terms.

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Chapter 16
All Relations Are Internal: The New Version

Ingvar Johansson

Abstract Kevin Mulligan has brought the distinction between thick and thin descriptions into the philosophy of relations, and with its help he has put forward the theses that all relations are "thin" and internal, and that none is "thick" and external. Accepting and using Mulligan's thin–thick distinction, I argue that not all internal relations are thin. There are thick internal relations, too; and they abound in mathematical physics. Also, I claim that there might be thin external relations. However, introducing a distinction between strongly and weakly internal relations, I agree with Mulligan that all strongly internal relations are thin relations.

Keywords Internal relation · Thick–thin · Resemblance relation · Determinable–determinate · Mulligan

16.1 The Bradley Thesis and the Mulligan Thesis

Bertrand Russell's criticism of F. H. Bradley's view that all relations are internal is one of several hallmarks in the birth of analytic philosophy. In his 1910–1911 papers on external relations, Russell is somewhat unclear about whether he wants to claim only that there are *some* external relations, or if he wants to claim that all relations are external (Russell 1992a, b); but at least in a 1924 paper it becomes clear that he means only the weaker claim (Russell 2004/1924, p. 335).[1] Bradley, however, is clear that there are no external relations at all.[2] To both Bradley and Russell their dispute had far-reaching ontological consequences. They took Bradley's view to imply ontological monism and Russell's ontological pluralism. If all relations are internal then, one might argue, what appear to us in perception and first

[1] It can be noted that Russell's (1903) criticism of Bradley in *The Principles of Mathematics* (2006) does not contain the distinction between external and internal relations, and that G. E. Moore's famous paper "External and Internal Relations" (1960) is from the early 1920s.

[2] "I do not admit that any relation whatever can be merely external and make no difference to its terms" (Bradley 1908, p. 575).

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reflections to be a plurality of different entities is after all only aspects of one single indissoluble all-embracing unity. Now, Bradley meant that the view that all relations are internal is only the best we can get in thought; reality as an all-embracing unity transcends thought and is inexpressible. Therefore, it can also truly be said that Bradley was of the opinion that at the bottom there are no relations, only the absolute unity known from religious mysticism (Candlish and Basile 2013, Sect. 6).

As far as I know, no analytic philosopher has tried to stage a comeback for Bradley's monism, but Kevin Mulligan has from an ontological pluralist position argued that all relations are "thin" and internal; and that none is "thick" and external.[3] This means, he says,

> a vindication of a view near the heart of the pre-Russellian philosophy of relations, but a vindication that detracts not a jot from the discovery of the logic of relations nor from the claim that relations are irreducible. (Mulligan 1998, p. 326)

Mulligan is a trope nominalist who not only believes in the existence of atomistic monadic tropes (property instances) but he also accepts relational tropes in the spatiotemporal world; if only they are "thin." He puts forward his view on relations in the paper *Relations—Through Thick and Thin* (1998), but the view is foreshadowed in his "Internal Relations" (1993). In metaethics, concepts such as "good," "right," and "ought" are called thin, whereas concepts such as "courageous," "generous," and "nasty" are called thick.

Remarkably, I would say, Mulligan's radical and original view has received very little attention.[4] In Sect. 16.3, I will extensively present his notions of "thin" and "thick," but let me nonetheless at once use them in order to state what my main criticism will amount to, and say something about the relationship between Bradley's thesis and Mulligan's thesis.

Explicitly, Mulligan states that (a) "all the thin relations I appeal to can be characterized as internal relations (1998, p. 327)"; implicitly, he seems to be of the opinion that (b) all external relations are thick relations. Of course, (c) no relation should be regarded as being both thin and thick, or (d) both internal and external. From a purely logical point of view, the conjunction of the propositions (a)–(d) do not imply that there are no *thick internal relations,* and I will in Sect. 16.5 argue that in fact there are. Mulligan, however, thinks there are none, and claims that "in every case [of a thick relational predicate], the real truth-maker is a thin relation (1998, p. 333)." This means that even though I think Mulligan is right in his claim that all thin relations are internal, I think that thin relations and internal relations cannot be

[3] Let it be added, though, that he cautiously calls his view a "suggestion" and "speculative"; furthermore, he ends the paper by saying that "we may well find ourselves on the slippery slope towards either conceptualism or eliminativism about relations" (Mulligan 1998, p. 326, 327, and 350, respectively).

[4] I know only of two papers where his view is discussed, not only mentioned. In the first, D.v. Wachter (1998) argues that if all relations are internal (with which he agrees) then there are no relations, since internal relations do not (contra Mulligan) add anything to being; in the second, Trettin (2004) speaks positively of how Mulligan analyzes relations by means of ontological dependence relations, and she supports (contra Wachter) the view that there can be relational tropes. I will not discuss this issue, where I side with Mulligan and Trettin; see Johansson (2012).

identified. Therefore, I can claim that I, not Kevin Mulligan, am the one who really is in favor of relations "through thick and thin."

Since Bradley is an ontological monist and Mulligan a pluralist, there must be some difference in the way they defend the view that all relations are internal. In my opinion, one difference goes back to an ambiguity in the characterization of internal relations (about this, see the end of Sect. 16.3) and another difference is that Mulligan is clear about the differences between (a) relations, (b) monadic/intrinsic properties, and (c) relational properties, whereas Bradley sometimes confuses the last two. Before I start my presentation and discussion of Mulligan's views, I will at once spend some words on the second difference.

At least at the time of the debate with Bradley, Russell wanted to get rid of modal talk, but in this, like many others, Mulligan included, I will not follow suit in the whole chapter. In 1911, Russell wrote,

> This doctrine [that relations are external] is not correctly expressed by saying that two terms which have a certain relation might have not had that relation. Such a statement introduces the notion of possibility and thus raises irrelevant difficulties. The doctrine may be expressed by saying that (1) relatedness does not imply any corresponding complexity in the *relata*; (2) any given entity is a constituent of many different complexes. (Russell 1992b, p. 128)

Point (1) is directed at Bradley who says that "a relation must at both ends affect, and pass into, the being of its terms" (1908, p. 364). In his direct reply to Bradley in 1910, Russell defines "external relation" as follows:

> I maintain that there are such facts as that x has the relation R to y, and that such facts are not in general reducible to, or inferable from, a fact about x and a fact about y only; they do not imply that x and y have any complexity, or any intrinsic property distinguishing them from a z and a w which do not have the relation R. This is what I mean when I say that relations are external. (Russell 1992a, p. 355)

Let me illustrate: Let x be a first green trope (or color spot) g_1, y a first brown trope b_1, and R a spatial distance of 5 m between the tropes. No physical law or logical impossibility seems to stop the world from containing also a second green trope g_2 (z) and a second brown trope b_2 (w) that are only 3 m apart. According to Russell's definition of external relation, this means that the relations *5* and *3 m apart* are external relations—with relata that have no internal complexity. On the other hand, the relation *being of the same color as* that holds between g_1 and g_2 as well as between b_1 and b_2 is, according to the definition, not an external relation. Anyone who accepts the existence of tropes or property instances has to admit all that.

Next, let me for the sake of exposition make the assumption that space is what it is assumed to be in Newtonian physics, i.e., a passive receptacle that in principle could have been empty. This means that there are relational properties in the situation at hand. Each of the simultaneously existing four tropes has a specific relational property to a region of space. Assume that g_1 has the relational property of *occupying region* r_1, g_2 the relational property of *occupying* r_3, b_1 that of *occupying* r_2, and b_2 that of *occupying* r_4. Now, if (wrongly) these four different relational properties are regarded as being intrinsic properties of the tropes in question, then g_1 (being in r_1) and g_2 (being in r_3), on their part, and b_1 and b_2, on theirs, are not completely

qualitatively identical. And this means that the relations *5 m apart* and *3 m apart* do not come out as being external relations. Not keeping a thing's intrinsic properties and relational properties clearly distinct, and (because of this) not allowing space to be regarded as a passive receptacle that does not affect its relata, is one of Bradley's mistakes; and one that to my mind Russell never really pinpoints.

In my symbolism, Mulligan's analysis of the described situation looks like this. First, there are four cases of the relation of (simultaneous) occupation, *O,* i.e., *relations,* not intrinsic properties or relational properties: g_1Or_1, b_1Or_2, g_2Or_3, and b_2Or_4, respectively. Second, there are thin and internal distance relations between all the different spatial points and regions; the two relevant ones can be symbolized as $r_1D_1r_2$ and $r_3D_2r_4$, respectively. The fact that g_1 has the relational property of *being 5 m* (D_1) *from* b_1 can from a Mulliganian ontological point of view best be described by the conjunction g_1Or_1 & b_1Or_2 & $r_1D_1r_2$. Now, if Mulligan can show that *occupation,* just like spatial distance, is an internal relation, he has with respect to this example shown that only internal relations are involved. I will in Sect. 16.4 return to this question.

It should be noted what happens in the case above if the four tropes are exchanged for four enduring colored leaves that can change color; call them G_1, B_1, G_2, and B_2. With respect to the relations *5 m apart* and *3 m apart,* it does not matter whether the relata are the tropes or the leaves. According to the definition of external relation, the distance relations in question are in the case of both kinds of relata external relations. But with respect to the relation *having (being of) the same color as* this is not the case. When the relata are g_1 and g_2 (or b_1 and b_2) the relation is internal, but when the relata are the enduring leaf entities G_1 and G_2 (or B_1 and B_2), it is external. Why? Answer: if G_1 is green as long as it endures, but G_2 after some time changes color to red, then *having the same color as* cannot be regarded as an internal relation between G_1 and G_2.

Since the relation *having the same color as* can be a relation between two entities only if these have a color, it brings clarity to the discussion if one calls the property instances (tropes) of the leaves the "primary relata" of the relation in question, and the leaves themselves "secondary relata" of the relation. One can then state a general truth: the relation *having (being of) the same color as* is always internal with respect to its possible primary relata, but it may be external with respect to secondary relata.

Let me now for the moment leave Bradley and Russell, and turn to Mulligan and his ontologically pluralist view that all relations are internal. During the presentation and discussion I will, among other things, use four distinctions that I think seldom are given due importance. Therefore, I would like to highlight them at once (the first two distinctions I have already used). They are:

1. Relations versus relational properties
2. Primary versus secondary relata of relations
3. Strongly versus weakly internal relations
4. Determinate versus determinable properties and relations

I will in all that follows accept Mulligan's presupposition that there are tropes, even though, in contradistinction to Mulligan, I am convinced that there are both tropes and universals (Johansson 2009a); for such a view, see also Lowe (2006). However, my belief in the necessity of postulating both tropes and universals is of no consequence for the arguments I shall put forward. Moreover, Mulligan seems to accept a (thin) relation of exemplification, and this relation can take care of the relationship between a universal and its instances (tropes).

16.2 Relations As Truth-Bearers and As Truth-Makers

Mulligan takes it for granted not only that there are tropes, but also that one has carefully to keep truth-bearers and truth-makers distinct;[5] and with this assumption I agree without any qualifications. His thesis can then be stated thus:

There are thick relational predicates and, because of this, thick relational truth-bearers, but there are no thick relational truth-makers, only thin ones.

There are three structurally similar claims that I would like to present, too. They align well with Mulligan's views (1998, pp. 332–333, 349):

a. Where there is a relational truth-bearer there may be no relational truth-maker at all;[6] for example, the truth-bearer "the morning star = the evening star" has as a truth-maker only the object Venus[7]
b. Where there is a truth-bearer with a thick monadic property predicate there may be a relational property as a truth-maker; for example, the truth-bearer "Sam is 2 m tall" has as truth-maker the state of affairs that Sam's length trope is two times that of the standard meter
c. Where there is a truth-bearer with a relational property predicate there may be only monadic properties and a relation as truth-makers; for example, the truth-bearer "Sam's length trope is two times that of the standard meter" has as a truth-maker the state of affairs consisting of (1) Sam's length trope, (2) the length trope of the standard meter, and (3) the length relation between the tropes

In point (c), the relational property mentioned in point (b) is reduced away. And as far as I can see, if Mulligan's analysis of relations is true, this must always be the case for relational properties. That is, even though truth-bearers can have relational property predicates as parts, there can be no truth-making relational properties, not even thin ones; there are only monadic properties and thin relations.

[5] I am using hyphens since Mulligan is using hyphens.

[6] For the view that *no* relational truth-bearer has a relational truth-maker, see Wachter (1998) and Heil (2009); for the falsity of this view, see Johansson (2012).

[7] If the example is analyzed as Frege wants, i.e., that the sentence claims that the two names refer to the same object, then one should perhaps say that the truth-maker is not only Venus but also two name–named relations. This does not affect Mulligan's main thesis, since the naming relation can be regarded as a thin relation.

16.3 Thin and Thick Relations

I have already mentioned the relationship between Mulligan's thin–thick distinction and the internal–external distinction. There are two other distinctions that are close to Mulligan's correlative thin–thick construal: formal–material and topic-neutral–topic-partial. However, he rejects an identification of thin–thick with either of them. He relies wholly on a characterization by enumeration. His list of thin relation predicates and corresponding thin relations is finite. Here is his list of thin relations:

1. Identity
2. Resemblance
3. Greater than/lesser than/same as
4. Distance
5. Dependence
6. Entailment
7. Justification
8. Exemplification (1998, p. 342)[8]

His list of thick relation predicates is in principle infinite, and his examples (all listed below) show why; it is in each case easy to fill in new relational predicates for the "etc." sign that I have added. Mulligan divides many of the thick relation predicates into three groups. In the list below, his groups are the first three ones; the other two groups are creations of mine ("–" is a variable for relata expressions):

1. Comparative thick relational predicates:
   "–is happier than–," "–is heavier than–," etc
2. Social thick relational predicates:
   "–is married to–," "–interrogated–," "–beat (in a game)–," "–voted for–," "–owns–," "–is legal tender in–," "–promises–," "–orders–," "–declares–," etc.
3. Behavioral thick relational predicates (that need not be social):
   "–kills–," "–loves–," "–gives–to–," "–prefers–to–," "–hits–," "–fled–," "–kisses–," etc.
4. Other thick relational predicates:
   "–causes–" and "–intentionality–."

(The latter predicate is short for "–has an intentional act directed at–"; it subsumes predicates such as "–sees–," "–sees that–," "–believes that–," which means that the intentionality talked about can be either nonconceptual, as in seeing, or conceptual, as in believing.)

5. Especially problematic thick relational predicates:
   "–is to the north of–," "–is located at–," "–is part of–," "–occupies–."

[8] He also mentions two other thin relational predicates, "–inheres in–" and "–is between–and–" (1998, p. 327), but he seems to regard these as reducible to the relations of dependence and greater than/lesser than. Also, he seems to regard greater than and lesser than as two distinct relations, but I think there is only one relation referred to by the two converse predicates "–greater than–" and "–lesser than–" (Johansson 2011). In his so-called *The 1913 Manuscript,* Russell is of the same opinion (Russell 1992, pp. 86–87).

To start with, let me say that I agree with Mulligan that there really is a kind of deep divide between his examples of thin and thick relational predicates, respectively; a divide that makes the connotations of the terms "thin" and "thick" fit well. Let me next very briefly sketch how he analyzes the first four groups; analyses with which I am quite sympathetic. Crucial is one of the thin relations mentioned, the dependence relation. The fact that *x* depends on *y* can be captured by locutions such as "*x* cannot exist unless *y* exists" (Correia 2008, 1014; but he wants it qualified) and "necessarily, *x* exists only if *y* exists" (Lowe 2009, Sect. 1).

Look now at the first group and the truth-bearer "Mary is happier than Erna"; and let me use the distinction between primary and secondary relata in order to present Mulligan's position. The primary relata are Mary's happiness and Erna's happiness, and the secondary relata are Mary and Erna. The truth-bearer sentence is in fact ambiguous. Does it mention the primary or the secondary relata of the *happier than* relation?

When it mentions the primary relata, Mulligan says that the truth-maker consists of three parts: (1) the two thick happiness tropes in question, (2) the thin and internal relation *greater than,* and (3) a thin and internal *dependence* relation between the thin relational trope *greater than* on the one hand and the two thick monadic tropes on the other. When it mentions the secondary relata, he says there is an external relation (1998, p. 345)—but without saying anything else and without explaining in what way this external relation disappears in the complete picture. The simplest thing to do would have been to explicitly qualify his general thesis that all truth-maker relations are thin and internal and claim only:

All truth-maker relations are thin and internal with respect to their primary relata.

The analysis made of the truth-bearer "Mary is happier than Erna" has a structure that can easily be applied to all corresponding two-term comparative thick relational predicates *R*:

If the truth-bearer *aRb* mentions the primary relata of the comparative relation *R*, then the truth-maker consists of (1) *a* and *b*, (2) the relation *greater than, lesser than*, or *same as*, and (3) a *dependence* relation between this relation and the pair *a* and *b*.

When analyzing the second group, that comprising social thick relational predicates, Mulligan brings in John Searle's analysis of social facts (Searle 1995). Searle claims that social-institutional facts are constituted by collective intentionality. If, for instance, it is true that Sam is married to Mary, this is so only because a certain kind of behavior is collectively regarded as a marriage. Social-institutional facts exist because we believe they exist, and they require conceptual intentionality. Mulligan's move is then to claim that the relational predicate "–intentionality–" has only thin truth-makers, in particular, the relation of *dependence*.

Mulligan makes his case about intentionality mainly by analyzing the veridical perception described by "Sam sees Mary." Disregarding at first causal theories of perception, he claims that the truth-maker is (a) Sam's visual content and (b) either a relation of *dependence* or one of *justification* between this visual content and Mary. The first truth-maker part is not a relation, and the relations in the second part are thin relations. The same analysis structure is then extended to "–sees that–"

and "–believes that–," where conceptual intentionality comes in.[9] His general view might be put like this:

> If the relational predicate *R* in the truth-bearer *aRb* is a social thick relational predicate, then the truth-maker consists of (1) *a, b*, and some intentional acts of at least *a*, and (2) a number of *dependence* (or *justification*) relations between relevant concepts, their referents, and a collective of which at least *a* is a member.

The first step in Mulligan's analysis of the third group, behavioral thick relational predicates, is to claim that all of them in some way or other fall back on the predicate "–causes–." The second step is to claim that the truth-makers for "–causes–" seem in fact on opposite philosophical views of causality always to be thin relations. (Note: this view takes care also of causal theories of perception.) If Hume's analysis of the relation of *causality* is true, then Mulligan retorts: "Mere co-existence or co-occurrence is a thin relation if anything is" (Mulligan 1998, p. 340). If, on the other hand, *causality* is regarded as a type of necessary co-occurrence, then, Mulligan says, it seems to be reducible to a number of *dependence* relations between events, processes, episodes, and/or states. (I would add that some specific spatiotemporal relations are needed, too, but be this for the moment as it may.) With respect to non-Humean analyses of causality, the general structure of Mulligan's view might be put like this:

> If the relational predicate *R* in the truth-bearer *aRb* is a behavioral thick relational predicate, then the truth-maker consists of (1) *a, b*, and some of their property instances, and (2) a number of *dependence* relations between these.

Very briefly stated, and some qualifications aside, Mulligan thinks that the thick relational predicates of groups two and three fall back on the two relational predicates of group four ("–causes–" and "–intentionality–"), and that these can be shown to denote only thin and internal relational truth-makers; in particular, the relation of *dependence*.

Let me now return to the difference between Bradley and Mulligan. Mulligan defines internal relations as follows:

> we may say that a relation is internal with respect to objects, *a, b, c* etc., just if, *given* [italics added] *a, b, c* etc., the relation must hold between and of these objects. (1998, p. 344)

In the first of my Russell quotations, Russell speaks of (but dismisses) two-term *external* relations as relations where "two terms which have a certain relation might have not had that relation." If, contrary to Russell, such modal talk is accepted, we get by exchanging "might have not" ("possibly not") for "necessarily" ("not, possibly not") the definition of (two-term) *internal* relations which Mulligan, David Armstrong (1978, 1997), and most contemporary analytic philosophers use: a relation is internal iff, necessarily, *given* the relata *a* and *b,* then *aRb*. That is, two-term internal relations are relations where two already given relata that have a certain

[9] This analysis makes it possible to claim that the order or direction that is part of the meaning of the social relational predicates does not correspond to anything in a relation, not even a thin one, but to something in the first relatum. I have argued in favor of such a view (Johansson 2010b), but Mulligan does not touch upon this issue.

relation, necessarily have that relation. But I think Bradley had a stronger characterization in mind, one that comes close to the *dependence* relation that Mulligan works with.

Surely, Mulligan's *dependence* relation is an internal relation according to the definition given, but it is stronger: *a* depends on *b* iff, necessarily, *a* exists only if *b* exists. The first relatum cannot exist if the second does not; and this is not necessarily the case with the relata mentioned in the definition of internal relations. In my opinion, Bradley argues that monadic properties *depend* on relations and that relations *depend* on monadic properties, i.e., that monadic properties and relations are *mutually dependent* on each other. He does not claim only that, *given* monadic properties (tropes) and relations there must be, in turn, relations between these. In order to clearly see everything at stake here, I think the contemporary notion of "internal relation" should be divided into two sub-notions: "strongly internal relation" and "weakly internal relation," respectively. They can be defined as follows:

1. There is between *a* and *b* a strongly internal relation iff, *a* cannot exist if *b* does not exist, and vice versa
2. There is between *a* and *b* a weakly internal relation R iff, *a* and *b* can exist independently of each other, but if both exist then, necessarily, *aRb*[10]

Looking at Mulligan's examples of thin internal relations, it is clear that at least *resemblance*, *greater than, lesser than,* and *same as* are weakly internal relations. To use my earlier examples, necessarily, the green trope g_1 *resembles* the green trope g_2, but the tropes can exist or not exist independently of each other; similarly, given the natures of Mary's and Erna's states of happiness, necessarily, Mary's happiness is *greater than* Erna's happiness, but the two happiness states might exist independently of each other. The view that all internal relations are strongly internal relations leads to ontological monism, but the view that many internal relations are only weakly internal is compatible with ontological pluralism. It is essential to Mulligan's view that he allows weakly internal relations, and this fact should be noted.

So far so good, I am prepared to say, but let us now look at the relation of *occupation*.

16.4 The Problematic Relation of Occupation

Already Bradley was clear about the central place that spatial relations between entities must be afforded in discussions about internal and external relations, and Mulligan is of the same opinion. Bradley writes:

[10] I have earlier made this distinction (Johansson 2004/1989, Chaps. 8 and 9), but then in terms of "internal relations" (=strongly internal) and "grounded relations" (=weakly internal). However, since the wide definition of "internal relation" has become the predominant one, I think the new name proposals are better.

> At first sight obviously such external relations seem possible and even existing. They seem given to us, we saw, in change of spatial position and again also in comparison. That you do not alter what you compare or re-arrange in space seems to Common Sense quite obvious. (Bradley 1908, p. 575)

In his fifth group of relational predicates, Mulligan regards "–occupies–" as the basic predicate. If (to take the other predicates) *a is to the north of b,* then *a occupies* one spatial region and *b* another; if *a is located at* a certain place, then *a occupies* a spatial region; and if *a is part of b,* then *a occupies* one spatial region, *b* another, and the latter region has the thin relation of *greater than* to the former. About *occupation* Mulligan says:

> Unfortunately, as we saw, the relational predicate "occupies" does not seem to have any internal relation as its semantic value. Occupation is an external relation through and through, the very model of an external relation, and mentioned so often by Russell for just that reason. […] However, there are two ways of dissolving the external relation of occupation. (1998, p. 345)

In his attempted dissolving, Mulligan for some unexplained reasons takes it for granted that the relata of external relations must be enduring things. As is clear from my introductory example about the tropes g_1, b_1, g_2, and b_2, I tend toward another opinion, namely that (thin) external spatial relations between tropes are possible. I will not, however, dwell on this issue.[11]

The "two ways of dissolving" talked about in the quotation are two different ways of claiming that in fact there are no enduring things/substances. Seemingly enduring things must be regarded either as space-time worms or as so-called *entia successiva,* i.e., as a number of succeeding temporary substances. And in either case, Mulligan says, *dependence* relations are enough to explain the seeming existence of enduring entities. The conclusion is: since there is nothing that can be relata in external relations, there can of course be no external relations. Again, I will without argument state dissent; I think we cannot make ontological sense of everything in our spatiotemporal world without postulating a number of enduring entities, both kinds of things and kinds of persons.

Mulligan is quite clear about the metaphysical cost of his analysis of the relation of *occupation*: "Each of these two ways of dissolving occupation involves rejecting what seems to be an assumption of naive physics, that there are enduring substances (1998, p. 346)." That is, despite his ontological pluralism, Mulligan's view that all relations are internal has, like Bradley's, ontological consequences that run counter to common sense. Also, let it be noted, if Mulligan's analysis of *occupation* is not valid, then neither is his analysis of *causality*; both causes and effects occupy spatiotemporal regions.

[11] Mulligan could retort that spatial relational property predicates such as "–occupies r_n" must, when applied to tropes, be regarded as representing something that is part of the identity of the tropes in question.

16.5 Thick Internal Relations

Accepting and using Mulligan's very distinction thin–thick, I will now claim and argue that not all internal relations are thin; there are thick internal relations, too. My claim affects only four of the thin relations he lists: *resemblance, greater than, lesser than,* and *same as*. I will (leaving *lesser than* and *same as* aside) argue that there are thick internal *resemblance* relations and thick internal *greater than* relations. Both these relations (as well as *lesser than* and *same as*) are weakly internal relations, whereas the other relations in Mulligan's list of thin relations seem to be strongly internal relations; at least if also a notion of one-sided strongly internal relation is introduced. Therefore, I can agree with Mulligan on a qualified view that is entailed by his general views:

> All strongly internal relations are thin relations.

It has often been remarked that *resemblance* is always *resemblance in a certain respect,* and I will later comment on this view. But for the moment, I will simply assume that this is true. There can be resemblances between weights, areas, temperatures, colors, between shapes, and so on, but not resemblances across these "respects." For instance, no weight resembles a temperature, and no color a shape. To this view, it is often objected that we do distinguish between warm and cold colors, and that therefore one should be cautious when claiming what I have claimed. But I disagree; no one has ever seriously tried to measure the warm–cold dimension of color hues in degrees Celsius, Fahrenheit, or Kelvin. Rather, one should be semantically cautious, and not be too quick to assume that there is no distinction at all to be made between the literal (prototypical) meaning and metaphorical (non-prototypical) meanings of words. Only temperatures can resemble temperatures, and only colors can resemble colors, but some colors can nonetheless become associated with some temperatures; the relations of *resemblance* and *association* are different relations.

If it is true that *resemblance* is always *resemblance in a certain respect,* it must also be true that *greater than* is always *greater than in a certain respect*. Let it not be misunderstood; I think there are abstract objects *resemblance simpliciter* and *greater than simpliciter,* but I do not think that they can have exemplifications in the spatiotemporal world without being tied to a so-called respect. Try to pick out two spatiotemporal entities where one is *greater than* the other without thinking of the respect in which the relation holds; I find this impossible.

Whereas the relational predicates "–resembles–" and "–is greater than–" are thin predicates, the relational predicates "–resembles–with respect to X" and "–is greater than–with respect to X" must be deemed thick relational predicates; X being just the name of an arbitrary respect such as color, weight and temperature.

Think now of the truth-bearer expressed by the sentence "the water temperature (*a*) is colder than the air temperature (*b*)"; and assume that the sentence is used in such a way that it is true. Question: Can its truth-maker be only the state of affairs consisting of *a, b,* and the thin relation *greater than*? Answer: No, it cannot, because it is then not ascertained that *greater than* has the temperature respect instead of oth-

er respects such as weight and volume that cannot connect temperature tropes. The truth-maker must consist of *a, b,* and the thick relation *greater than with respect to temperature*. I hope that, without further examples, it can be seen that a structurally similar kind of remark can be made in relation to quite a number of truth-bearers such as "*a* is heavier than *b,*" "*a* is longer than *b,*" "*a* is brighter than *b,*" "*a* is harder than *b,*" etc. In the cases mentioned, the respects are, in turn, weight, length, light intensity, and hardness.

As I have tried to make clear in two other papers, the truth-maker fact just highlighted is not only a fact to take into account in subtle ontological discussions; it is very important both to the philosophy of science (Johansson 2009b) and to metrology, the science of measurement (Johansson 2010a). Without relations such as *greater than with respect to X* there would be no metric or ordinal measurement *X*-scales at all, only classifications by means of names. And without relations such as *exact resemblance with respect to X,* it would be impossible to use a measurement scale on two different occasions, and truly claim that if the measurement values are the same then the objects measured have the same determinate property.

What I have so far called a "respect" is normally called a "determinable" (Sanford 2011). The determinable–determinate distinction and the genus–species distinction have certain features in common, but they also differ importantly, which makes the term "determinable" (or synonymous expressions) necessary. Let me mention the similarities first. Necessarily, if there is a scarlet trope, then there is a red trope, and if there is a red trope, then there is a color trope; necessarily, if there is a cat, then there is a mammal, and if there is a mammal, then there is an animal. Conversely, necessarily, if there is a color trope, then it has to have a certain determinate color hue; necessarily, if there is an animal then it has to be of a specific species.

The difference between the distinctions is that whereas mammals can be defined as animals that have certain specific properties, and cats be defined as mammals with certain specific properties, red cannot be defined as colors that have certain properties (red is not a property of color), and scarlet not as red that have certain properties (scarlet is not a property of red). Species have properties by means of which they can be characterized, but determinates can only be characterized by means of resemblance relations to other determinates.[12]

In this terminology, one of my claims is that the basic scales of mathematical physics cannot be understood without thick internal relations such as *greater than with respect to the determinable X* and *resemblance with respect to the determinable X*. In some way or other, the unity behind a scale has to be explained. As I have already pointed out, this cannot be done by the thin relations *greater than simpliciter* and *resemblance simpliciter*. How, then, does Mulligan handle this problem?

In his paper *Relations—Through Thick and Thin* (1998), he does not mention the determinable–determinate distinction, but in the earlier "Internal Relations" (1993) he does. He admits that the distinction might be useful in certain kinds of ontologies, but not in his own; he explicitly rejects "relations between a determinate con-

[12] For more details about how the distinctions differ, especially in the formal structure of the corresponding classification hierarchies, see Johansson 2008, Sect. 3.

cept (expressed by an adjective such as 'red') and its determinable ('coloured')" (1993, p. 8). He says that "the trope nominalist will want to hold them at arms length (ibid.)." In the framework of his 1998 paper, this view of his can be rephrased as follows:

> There are determinable predicates and, because of this, determinable truth-bearers, but there are no determinable truth-makers, only determinate ones.

I have, from an immanent realist position with respect to universals, argued that there are not only the most specific determinate universals and their instances but also universals and corresponding instances that are highest determinables (Johansson 2000). Mulligan, as I have mentioned, rejects universals, but why does he not accept trope determinables as truth-makers? His main reason why a trope nominalist should reject such entities is that:

> he hopes to retain such relations only at the level of concepts and do the ontological work done by determinable properties in non-nominalist systems with the help of higher-order relations of greater or lesser similarity and dissimilarity amongst groups of resembling tropes. (1993, p. 8)

Let us now see what such a construction by means of higher-order resemblance relations amounts to. In order to do so, we have to go back to the remark that resemblance, necessarily, is resemblance in a respect. The trope nominalist can say that although this remark certainly is true for comparisons of things, because things always have several different kinds of properties, it is not true when it comes to tropes. Since tropes are simple there is no respect or determinable, and none is needed in order to make comparisons between them. In the discussion that follows I will use different determinate length tropes as examples.

I agree with the trope nominalist that all lengths of, e.g., 15.0031 m can be regarded as exactly similar without bringing in any determinable.[13] In the abstract meter scale, the value 15.0031 m can be taken as denoting the class of all real and possible length tropes that have this length. The value chosen is a completely arbitrary value, which means that to each value of the meter scale there is a specific and distinct exact-resemblance class of tropes. Between all these exact-resemblance classes there are other—higher-order[14]—relations of resemblance; not of exact resemblance but relations of greater or lesser similarity. Therefore, the whole meter scale can be identified with such a class of exact-resemblance classes. I think such a view is what Mulligan hints at and has in mind, and no determinable has so far been mentioned.

At first, the construction looks simple and elegant, but one thing is missing. One has to explain not only the relations within the length scale, but also why certain

[13] The difference is that I regard the resemblances grounded in and emerging "bottom-up" from instances of a determinate monadic universal, whereas the trope nominalist regards the instances (tropes) as receiving their general property identity "top-down" from the exact resemblance relation under discussion.

[14] It might be argued, though, that the resemblances between the classes at bottom are first-order resemblances between tropes in the different classes.

entities cannot possibly become part of it. There are two kinds of questions: What makes the exact-resemblance classes denoted by 1, 2, and 3 m belong to the same scale, and what makes 1 kg, 2 s, and 3 m/s necessarily excluded from it? As far as I can see, the latter question cannot be answered without bringing in determinables and, thereby, *thick* comparative relations. There is a great dissimilarity between 10 m and 10^{100} m, but there is an even greater dissimilarity between 10 m and 10 kg. There must be something that creates a border for how large dissimilarities there can be in one and the same scale. What follows is a brief exposition of what I have once called "the gap argument for determinables" (2000, Sect. 3).

If we take two arbitrary length tropes, we can always (at least in thought) find a number of other length tropes by means of which we can connect the first two in a continuous chain. And the same goes for two mass tropes, two temperature tropes, and so on. It is more or less true also of two arbitrary shapes, even though there is no shape scale. But it is impossible to find a trope chain that connects a length trope with a mass trope, a temperature trope, or color trope, and vice versa in all combinations. There is in this sense an ontological gap between the kinds of tropes in question, which also explains why we cannot give additions, such as 2 m + 3 kg, a meaningful sum. How ought a trope nominalist best explain these fundamental gaps? As a realist, I have argued that the positing of determinables as universals and as instance must be the best and simplest way to explain the unity of the basic scales. All determinate length instances also contain an instance of a length determinable, and all determinate mass instances also contain an instance of a mass determinable. A 10 m length instance differs less from a from a 10^{100} m instance than from a 10 kg instance because it has a determinable in common with the former instance but not with the latter. And what lacks the length determinable can never become part of the length scale. My proposal for the trope nominalists is then of course that (having rejected universals) they posit trope determinables and relations of exact resemblance between these. The cost would be that they have to delete the view that tropes are simple.[15] On my proposal, there can be no trope determinate without a trope determinable within itself, and no trope determinable without some trope determinate within itself.

The view put forward by no means implies that to every determinable predicate there is a corresponding truth-maker determinable. Quite the contrary, since there are truth-maker determinables only where there are ontological gaps of the kind mentioned. Determinable predicates can by definition be ordered into levels; for instance, on top of the determinate predicate "scarlet," we find the predicate determinables "red" and "color." Of these, "color" is connected with a gap, but "red" is not. Red tropes can by means of other color tropes be continuously linked to any other arbitrary chosen color trope. The extensions of predicates such as "red," "blue," and "yellow" are created by means of conventions. That is, even though we have the predicate "red" there is no truth-maker determinable red; the predicate denotes only a disjunction of truth-maker determinates which all have the same

[15] The common view that tropes are simple is nicely worked out in Maurin (2002); since Mulligan says nothing to the contrary, I have interpreted him as having the same view.

truth-maker determinable, namely color. The conventionality of the common color predicates exists so to speak in-between the most specific determinates and the color determinable.

Let me end this brief argument; the main point is hopefully clear. I think it is impossible for Mulligan and other trope nominalists to explain the basic scales of mathematical physics without bringing in at least trope determinables. Their class-of-classes constructions rely wholly on resemblance relations, but these cannot possibly take account also of the "gaps" needed for the constructions. And where there are determinables there are thick internal relations.

16.6 Sometimes There is Something New Under the Sun

What has been claimed in philosophy will be claimed again, what has been argued will be argued again; there is nothing new under the philosophical sun. So, many people seem to think; but I think the saying is false. Bertrand Russell's claim about external relations was quite original, and so is Kevin Mulligan's distinction between thin and thick relations. Even though, contra Mulligan, I am confident that there are thick internal relations, and also think that there might be thin external relations, I find it a very innovative move of his to bring the distinction between thick and thin concepts and descriptions into the philosophy of relations.[16]

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Chapter 17
Connectives, Prenectives and Dishonoured Cheques of Metaphysical Explanation

Philipp Blum

Mein Grundgedanke ist, dass die 'logischen Konstanten' nicht vertreten. Dass sich die Logik der Tatsachen nicht vertreten lässt. (Wittgenstein, 1921, § 4.0312)

Abstract Throughout his work, Kevin Mulligan has shown an ongoing concern with the theory of metaphysical explanation. What do we aim for, when we, e.g. try to elucidate the natures of essence, value, perception, truthmaking, norms, emotions, relations, and colours? Mulligan has done more than anyone to elucidate what he calls the 'metaphysical "because"', in terms of which we formulate metaphysical explanations. Things mentioned on the right-hand side of such explanations, a natural thought goes, are more fundamental than those that are mentioned on the left-hand side. They stand to the latter in a relation of grounding, and the holding of this relation makes the 'because' sentence true. In recent work on Künne's 'modest account of truth', however, Mulligan has flirted with the idea that 'because'-sentences themselves are fundamental, i.e. not further analysable and not underwritten by real relations, in virtue of the obtaining of which they are true. In my contribution to this *Festschrift,* I argue that we (and he) should resist this temptation: While it is true that operator locutions are often convenient, they do not reveal the fundamental metaphysics. There is no explanation to be had without accepting something doing the explaining.

Keywords Metaphysics · Truth · Truthmaking · Connectives · Explanation

17.1 Truth Without Truthbearers?

In recent writings, Kevin Mulligan (2010, 2011) has argued against Künne (2003) that the latter should extend his 'modest' accounts of truth and of truthmaking without truthmakers to an account of truth without truthbearers urging—against Künne—the primacy of the truth connective 'it is true that …' over the truth predicate '…is true'.

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In his magistral *Conceptions of Truth* (2003), Künne proposed what he calls a 'modest' account of truth, characterising the truth-predicate by any of:

Mod$_1$ $\forall x$ (x is true $\leftrightarrow$ things are as x has it)
Mod$_2$ $\forall x$ (x is true $\leftrightarrow$ things are as they are according to x)
Mod$_3$ $\forall x$ (x is true $\leftrightarrow$ for some ways things may be said to be, x is the proposition that things are that way, *and* things are that way) (2003, pp. 335–336) or rather, to avoid misunderstandings,[1]
Mod $\forall x (x \text{ is true} \leftrightarrow \exists p\ (x = \lceil p \rceil\ \&\ p)$ (2003, p. 337)

where '[…]' abbreviates the singular term-forming operator 'the proposition that …'. Künne claims that **Mod** improves on Horwich's minimalism by being conceptually more economical and by stating what all truths have in common. **Mod**, however, also shares an important drawback of the minimalist theory: in particular, it applies only to propositions designated by singular terms of the form 'the proposition that …' (Künne 2003, p. 340). Künne says that these proper names are semantically structured in that they 'contain' the sentence of the second conjunct (2003, p. 342).

Künne (2003, p. 360) is explicit that his modest account presupposes the intelligibility of higher-order, but objectual, quantification over propositions and endorses the ontological commitment thereby incurred. This brings with it a familiar problem of circularity: Sundholm (2008, p. 364), for example, thinks it is a 'mystery how to explain [Künne's] deviant quantifier without recourse to truth'. The circularity does not lie, as Künne (2008, p. 389) thinks, in the specification of the truth-conditions of the sentential quantification,[2] but rather in the only way of explaining the double role of the things quantified over, to wit propositions: They are characterised as entities which are not referred to, but expressed by permissible substituends for the nominal variable. They are things which exist ('$\exists$p(p)'), and thus can be named, but also are things that name themselves and, in general, are not 'given to us' by name but by some sentence which expresses them. They thus do double duty: They exist, and have properties, but they are also expressed, and the meanings of sentences.[3]

This is not quite Dummett's argument that propositions are sentence-meanings and that the notion of a sentence-meaning cannot be explained independently of the notion of truth. Künne (2003, pp. 369–372) is right that objects of beliefs need to

[1] One misunderstanding is that quantification over ways, not over propositions, is intended (Hofweber (2005, p. 137), David (2006, p. 189), Boghossian (2010, p. 555)). Immediately following **Mod$_3$**, however, Künne (2003, p. 336) makes it clear that 'things are that way' functions as a quantificational prosentence in **Mod$_3$**.

[2] They can indeed be provided using the homophonic semantics of Williamson (1999, pp. 261–263) for these sentential quantifiers that Künne (2010b, p. 587) invokes.

[3] Künne explicitly acknowledges this: 'Permissible substituends for "p" do not designate values of this variable. […] Permissible substituends for "p" express values of this variable' (2008, p. 389; cf. also 2003, p. 360). He thinks that our grasp of the nominal mode of 'introducing' propositions is based on our grasp of the sentential mode of 'introducing' them (2003, p. 367). I am putting scare quotes because a nominalist could plausibly deny that 'p' 'introduces' any proposition at all.

be individuated more finely than sentence-meanings and that 'proposition' is better taken to stand for the former than for the latter.

The circularity worry, as I understand it, concerns the expression relation: what *other,* truth-independent, grasp do we have of what some sentence expresses than the familiar idea how the world would have to be like for it to be true?[4] This, I think, is a version of the 'denial of intelligibility' charge Davidson (1996) advanced against Horwich,[5] to which Künne (2003, pp. 328–329) does not adequately reply. It is not primarily (or at least not only) a worry about the intelligibility of names for propositions (which could be dispelled by a paratactic theory as the one Künne (2003, p. 329) sketches). Rather, it concerns the particularly transparent character of these descriptive names, for propositions i.e. the fact that we know everything there is to know about their referent once we understand them at all. It follows that we do not know what is denoted by 'the proposition that p' unless we understand the proposition that p, and understanding this requires understanding under what conditions it is *true*. To understand **Mod**, then, we have to deploy an understanding of '…is true', and hence **Mod** is, as a definition of the truth-predicate, epistemically circular.[6]

The problem in a nutshell is the following: to understand *why* propositions are the kind of things that can play the double role they play in **Mod—**and be quantified over both by quantification into singular term and into sentence position—we have to understand them as the kind of things that are bearers of truth; it is the truth-predicate that provides the 'bridge' between their 'nominal' and their 'sentential' role. To understand **Mod**, we need to understand the hybrid form of quantification it deploys, and hence the hybrid nature of the things quantified over, which is due to their essential evaluability for truth.

It is not clear, however, that Künne needs to be worried about *this* kind of circularity. As he makes very clear (2003, p. 13, 16, 118, 338), he does not aim to propose an eliminative ('dismantling'), but just a 'connecting' (explanatory) account of truth, and does not aim to explain the concept of truth without using it. The intertwining of his theories of propositions and of truth, however, makes him vulnerable to another worry that more directly threatens Künne's project.

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[4] Kneale (1972), in a paper where he proposes the 'modest' account (cf. n. 14 below), says that '… the lesson to be learnt from the Liar paradox is nothing specially concerned with truth or falsity, but rather that ability to *express* a proposition can never depend on an ability to *designate* it' (1972, p. 243). Harman (1970, p. 99) makes a related point against the 'modest' account of Williams (1969).

[5] This is how Künne (2003, p. 327) characterises the following remark by Davidson (1996, p. 274), which he takes to be directed equally against his modest account: '[T]he same sentence appears twice in instances of Horwich's schema ["The proposition that *p* is true iff *p*"], once after 'the proposition that', in a context that requires the result to be a singular term, the subject of a predicate, and once as an ordinary sentence. We cannot eliminate this iteration of the same sentence without destroying all appearance of a theory. But we cannot *understand* the result of the iteration unless we can see how to make use of the same semantic features of the repeated sentence in both of its appearances—make use of them in giving the semantics of the schema instances. I do not see how this can be done.'

[6] I think that the same problem threatens 'hybrid' quantification over properties, both into predicate and into singular term position, such as in 'Ben is impatient, and that is a bad quality in a teacher' (Künne 2003, p. 366), but I cannot make good on this claim there.

In his recent work (2010), Kevin Mulligan has raised a novel objection to the modest account, and indeed all accounts of truth, which take the truth-predicate '…is true' as their *definiendum*. Mulligan distinguishes the truth-predicate '…is true' (which takes a singular term to make a sentence) from the truth-connective 'it is true that …' (which takes a sentence to make a sentence) and asks which one wears the trousers, answering that the connective, not the predicate is fundamental. He thus criticises the contention of Künne (2003, pp. 350–351) that his account of the predicate equally applies to the connective, which the latter interprets as also containing a predication of the truth-predicate, the 'it' in 'it is true that…' functioning cataphorically, by providing the thing referred to by the subsequent noun phrase 'that *p*' (cf. also Horwich 1998, p. 16, n. and Künne 2013, p.161).

Though it is not entirely clear this has been realised by its participants, I think there is more at stake in this dispute than the relative priority of the truth-predicate or truth-connective. Mulligan's point, if sound, undercuts Künne's explication of 'proposition', as the word one comes to understand by 'learning to accept, as a conceptual matter of course, any inference from (a substitution-instance of) schema [$\mathbf{B}_1$] via [$\mathbf{B}_2$] to the corresponding instance of [$\mathbf{B}_3$], and vice versa' (Künne 2003, p. 251), where such substitution instances may be the found in the following transformations:

$\mathbf{B}_1$ A believes that it rains
$\mathbf{B}_2$ That it rains is the content of A's belief
$\mathbf{B}_3$ The proposition that it rains is the content of A's belief

Contrary to most critics, who have found the introduction, in the step from $\mathbf{B}_2$ to $\mathbf{B}_3$, of 'proposition' problematic, Mulligan's argument targets the step from $\mathbf{B}_1$ to $\mathbf{B}_2$. Why think, a Mulligan-inspired question goes, that $\mathbf{B}_1$ asserts a *relation* between a believer and some content, made more explicit in $\mathbf{B}_2$? Why not take 'x believes that p' to be a hybrid connective or 'prenective' (Künne 2003, p. 68), a member of a class of expressions that 'are as it were predicates at one end and connectives at the other' (Prior 1971, p. 19)? This is not just a question about syntax: If 'that it rains' is not an isolable component of $\mathbf{B}_1$, nothing is predicated of it, and it cannot truly be said to be the content of A's belief ($\mathbf{B}_2$). If there are no such things as contents of beliefs, then Künne's modest account does not get off the ground, **Mod** either containing an empty singular term or being guilty of illicit reification.

By undermining the need for propositions, Mulligan's criticism undercuts Künne's argument for his modest account of truth. In the case of truth-attributions, we have an intermediate step:

$\mathbf{T}_1$ It rains
$\mathbf{T'}_1$ It is true that it rains
$\mathbf{T}_2$ That it rains is true
$\mathbf{T}_3$ The proposition that it rains is true

While Mulligan agrees with Künne (and Bolzano) that the step from $\mathbf{T}_1$ to $\mathbf{T'}_1$ and the concomitant 'introduction' of that-clauses is unproblematic, he thinks that the one from $\mathbf{T'}_1$ to $\mathbf{T}_2$, and its ontological commitment, can be resisted. As we have seen, Künne (2003, p. 351) holds that the first 'it' in $\mathbf{T'}_1$ is a cataphoric pronoun,

as 'he' is in 'he was wise, the man who drank the hemlock' and that $\mathbf{T'}_1$ and $\mathbf{T}_2$ are 'stylistic variants' of each other (2003, p. 351; 2010b, p. 597). Against this, Mulligan (2010, p. 567, 569) claims that:

$\mathbf{M}_1$ It is true that it rains because it rains
$\mathbf{M}_2$ That it rains is true because it is true that it rains
$\mathbf{M}_3$ The proposition that it rains is true because that it rains is true

While $\mathbf{M}_1$ is accepted by all sides (and Künne (2010b, p. 59), with some qualifications, agrees with $\mathbf{M}_3$), $\mathbf{M}_2$ is contentious. Mulligan (2010, p. 569) gives three arguments for $\mathbf{M}_2$: (i) that its left-hand side is more complex than its right-hand side, (ii) that it mentions something more problematic and (iii) that nominalisations are secondary with respect to what they are nominalisations of. In support of (i) he claims that the 'it' in 'it is true that …' is a dummy term, an expletive pronoun like the 'it' in 'it's a long way to Tokyo', that cannot be used in identity statements such as 'it = that it rains' (2010, pp. 572–573). To some extent, Künne concedes this point (2011, p. 202, 206). More important, in my view, are (ii) and (iii). The cryptic remark (iii), in this context, is best understood as a preference for less, rather than more, ontological commitments, while (ii) highlights the crucial issue: the alleged difference, between $\mathbf{T'}_1$ and $\mathbf{T}_2$, in ontological commitment. If really 'it is true that' is semantically unbreakable, and does not predicate of anything the property of being true, then the step to $\mathbf{T}_2$ introduces a new, and potentially problematic, ontological commitment. Even though Mulligan defends the unbreakability of 'it is true that …' at some length,[7] and Künne presents several arguments against this claim,[8] Mulligan's real concern, if I interpret him right, is with the *ontological,* not the logical form of $\mathbf{T}_1$, i.e. with the question whether it commits us to truthbearers. If it does not, then neither does $\mathbf{T}_2$, in virtue of $\mathbf{M}_2$ (nor does $\mathbf{T}_3$, in virtue of $\mathbf{M}_3$).

Boghossian (2010, p. 558) raises a similar worry in the following form: even granting that the step from $\mathbf{B}_1$ to $\mathbf{B}_2$ is analytic, why should we think of it as a 'means of grasping the notion of a proposition' rather than as an 'implicit definition of a technical notion—"the content of"—'? In reply, Künne (2010b, pp. 589–590) points out that the reasons usually advanced against the substitutivity *salva congruitate* of 'that p' and 'the proposition that p' do not apply in the context of $\mathbf{B}_1$ and dismisses them as 'quirks of grammar'. The worry, however, was not about the expansion of 'that p' to 'the proposition that p', but about the introduction of 'that p' in the first place. Applying Mulligan's point to $\mathbf{B}_1$, we do not get $\mathbf{B}_2$, but rather 'A's belief is that it rains' which is said to express not an identity, but rather some sort of specification à la Pryor (2007) and that 'that p' is a 'less than fully fledged name'

[7] Mulligan uses a curious strategy to do so, contemplating the possibility that one introduce an explicitly unbreakable truth operator 'true+', in analogy with 'probably', into English, German or French (2010, p. 576). It is not straightforward to determine, however, what light the possibility of such an operator would cast on the *actual* 'it is true that …'. Künne calls the suggestion 'déroutante' (2011, p. 212).

[8] While he agrees that one *can,* as Frege did with his negation stroke, introduce an unbreakable truth-operator into any language, he thinks that this will not correspond to 'it is true that…' (2010a, p. 559; 2011, p. 206).

(2010b, pp. 573–574). If 'is that' in 'A's belief is that it rains' does not stand for ' = the proposition that …' but rather for 'has the content: …' (Pryor 2007, p. 234), then $\mathbf{B}_\mathbf{I}$ cannot be said to introduce us to the concept of a proposition.

According to Mulligan's alternative picture—and contrary to Frege, Bolzano and the contemporary orthodoxy— belief is not conceived of as a propositional attitude: to believe that p is *not* to stand in a relation to the referent of 'that p'.[9] Rather, 'believes that …' is a predicate-forming operator which, combined with a sentence, ascribes a property of having a belief of a certain kind[10] or rather describing such a property.[11] This does not mean we are home and dry, however. To capture the internal structure of such belief-properties, and to explain the validity of inferences like 'a believes that p; b believes that p; hence, there is something they both believe', some sort of quantification into predicate-position will have to be introduced: if it is interpreted substitutionally, it makes beliefs language dependent and individuates them too finely,[12] if it is interpreted objectually, it reintroduces objects of belief and it is not clear how it can be interpreted in neither of these ways.

We thus see that Mulligan's worry really is about ontological commitment. As I understand it, Mulligan's point is inscribed into a more general strategy of making good on the Husserlian claim that 'ground' and 'explain' derive from 'because' (Mulligan 2004, p. 391). As Correia (2010, p. 254) stresses, the main motivation for the operationalist view is 'reasons of ontological neutrality: it should be possible to make claims of grounding and fail to believe in facts'.[13] Analogously, we may understand Mulligan as urging that we may believe in claims of the forms 'it is true that p' and 'a believes that p' without believing in truths or objects of beliefs.

Mulligan's criticism can thus be understood as urging Künne to go back to his earlier self, who claimed (in 1983, p. 121) that the variable in '$\forall p$ (Otto claims that p & p)' is what Brentano (1930, p. 76) calls a 'Fürsatz', i.e. a pro-sentence, and does *not* incur an ontological commitment (cf. Künne 2008, p. 390).[14] Rather,

[9] Bach (1997, pp. 222–223) cites Burge (1980, p. 55), Fodor (1978, p. 178) (cited after reprint in Fodor (1981)), Schiffer (1992, p. 491, 505), Soames (1987, pp. 105–106) and Stalnaker (1988, pp. 140–141) as representatives of the orthodox view. I sketch another unorthodox view in my 'Expressivism about Belief'.

[10] Cf. McKinsey (1999, p. 527) for a recent version of this view.

[11] Compare Bach (1997, p. 224) for an argument against what he calls the 'specification assumption'—'that belief reports specify belief contents, i.e., to be true a belief report must specify a proposition the person believes' (1997, p. 222)—based on the Paderewski puzzle: 'According to the descriptivist view, the condition on the truth of a belief report is that the believer believe a certain thing which requires the truth of the proposition expressed by the 'that'-clause in the belief report. […] Just as "Adam bit a certain apple" does not specify which apple Adam bit, although it entails that there is a certain one that he bit, so "Peter believes that Paderewski had musical talent" does not specify which sort of that-Paderewski-had-musical-talent belief he has, although it requires that there be certain one that he has.' (1997, p. 226)

[12] We will not be able to infer that there is something a and b both believe, for example just on the basis of the truth of 'a believes that snow is white' and 'b croit que la neige est blanche'.

[13] This is also why Fine (2012) opts for a notion of ground as an essential operator.

[14] In fact, Künne (1983, p. 126) already proposed the modest account and said that it 'went back' to Kneale (1972, p. 239) and Mackie (1973, p. 52) (cf. also Mackie (1970, p. 330)). He could also

he then said, it is to be understood as quasi-ontic quantification à la Prior (1971, p. 36, 68) and Lejewski (1970, pp. 174–178). Künne now says that '[i]n the years after the publication of (2003) [he] ruefully returned to the view of quantification into sentence-position that [he] had endorsed in (1983): sentential quantification is quantification *sui generis*—it is not quantification over anything, and it is not substitutional quantification either.' (2010b, p. 586) But what *is* it?

An immediate problem, therefore, is how to understand quasi-ontic quantification. Understanding it as substitutional[15] makes the 'modest' account circular, for reasons clearly explained by Künne (2003, pp. 357–359). So how is to be understood? In 2003 (p. 361, fn. 130), Künne agrees with the complaint of Richard (1996, pp. 438–442) that Prior's view makes sentential quantification 'unduly mysterious'.

While Mulligan's point legitimately pressures Künne on this point, it also undercuts the very project. Even if we grant the intelligibility of primitive, sui generis 'quasi-ontic' quantification, Mulligan's problem remains: Both $\mathbf{B}_2$ and $\mathbf{T'}_1$ do, as Künne (2010b, p. 587, n. 10) says, start from '"something," namely a premiss containing a "that"-clause'. If the relational construal of 'believes' and the predicational construal of 'it is true' are undercut, then these sentences do not have quantificational structure *at all,* quasi-ontic or not. Fortunately for Künne, this broader attack can be answered.

17.2 The Aristotelian Equivalence and The Relational Nature of Truth

To better understand the central issue in question, and to prepare the grounds for my criticism of Mulligan's criticism of Künne, let us briefly review a claim about which they agree, i.e. $\mathbf{M}_1$ above. Nothing, we learned on Tarski's knees, deserves the name 'truth-predicate' if it does not satisfy the T-schema (Tarski 1933) or 'Aristotelian Equivalence':

(**T**) It is true that *p* iff *p*.

The T-schema is a biconditional, and with all biconditionals, we may ask in what direction (if any) goes the relation of explanatory priority (or, equivalently, which side 'wears the trousers'). This question may be phrased as the one whether

have mentioned Williams (1969, p. 116), to whom Mackie (1973, p. 60) refers. Williams (1971) subsequently defended the 'modest' account against the criticism by Sayward (1970) that it presupposes, rather than explains, propositions, before finally giving it up in favour of nihilism in his (1976), which Künne discusses.

[15] Both Prior and Lejewski say things pointing in that direction, claiming that the meaning of propositional quantification is to be given in terms of 'specifications'—'a "specification" being a sentence in which the prefix "for some p" is dropped, and the remaining variable p replaced by an expression of the sort for which it stands, i.e. a sentence' (Prior 1971, p. 36)—or their infinite expansions into conjunctions and disjunctions (Lejewski 1970, p. 175). Quine, in the discussion following Lejewski (1970), interprets him this way.

(**r2l**) It is true that *p* because *p*

or rather

(**l2r**) *p* because it is true that *p*

is true. As far as I know, it is common ground that if one of them is true at all, it is (**r2l**), i.e. $\mathbf{M}_{\mathbf{I}}$.[16] Some of us want indeed to be able to say things like:

> Truth is a matter of reality, which means that if a statement is true, it is because reality renders it true: No sentence is true but reality makes it so… (Quine 1970, pp. 10–11)
> It is indeed undeniable that whenever a proposition or an utterance is true, it is true *because* something in the world is a certain way—something typically external to the proposition or utterance. (Horwich 1998, p. 104)

In the first edition of *Truth*, Horwich (1990, pp. 111–112) accepted 'Snow is white's being true is explained by snow's being white', 'The fact that "snow is white" is true is explained by the fact that snow is white', and even '" snow is white" is made true by the fact that snow is white' as 'trivial reformulations' of (**r2l**) and said that the minimal theory could account for it:

> In mapping out the relations of explanatory dependence between phenomena, we naturally and properly grant ultimate explanatory priority to such things as basic laws and the initial conditions of the universe. From these facts we deduce, and thereby explain, why for example
> (5) Snow is white.
> And only then, given the minimal theory, do we deduce, and thereby explain, why (6) 'Snow is white' is true. (Horwich 1990, p. 111)[17]

Why this falls short of accounting for the '"correspondance" intuition'[18] has been aptly put by Crispin Wright:

> This train of thought, it may well seem, is just beside the point. The challenge was to legitimate the idea of a state of affairs (snow's being white) being the *source* of the truth of the sentence 'snow is white'—the idea of a state of affairs transmitting a truth value, as it were, across a substantial relation, the converse of correspondence. [Horwich's explanation] is, evidently enough, not to explain why 'snow is white' is true in terms of *snow's being white*; it is rather (quite a different thing) to explain why 'snow is white' is true in terms of the physical laws and initial conditions which also explain snow's being white. (Wright 1992, pp. 26–27)[19]

While Künne (2003, pp. 156–157) agrees with Wright's criticism of Horwich, he does not say much about how his own account fares any better. But it does. The general statement of the modest account allows us to locate the explanatory priority

[16] Soames (2008, p. 317) even goes so far to call an instance of (**l2r**) 'patently ridiculous'.

[17] In the second edition, Horwich (1998, p. 105) simply says that '[s]ince [that truths are made true by elements of reality] follows from the minimal theory (given certain further facts), it need not be an explicitly stated part of it'.

[18] Both Horwich and Wright put scare quotes.

[19] In a rather cryptic comment immediately following the quote, Wright goes on to say that even though this comment is 'fair', there is not really a problem at all. Künne (2003, p. 157) also finds Wright's comments 'not very illuminating'.

on the right-hand side of (**T**), by privileging the expressing function of the sentential variable over its denoting one. It is because 'p' has the meaning it has that it is true iff p.[20]

It is not clear, however, how Mulligan's anemic operator-theory can match this. The question is not so much whether one's account of truth allows us to *accept* $\mathbf{M}_1$—it is rather what resources it does provide to *explain* $\mathbf{M}_1$. It is here, I think, that we find a reason to side with Künne against Mulligan on the relative priority of the truth-predicate and the truth-connective. If we do not identify, in $\mathbf{M}_1$, an attribution of the property of truth to some truthbearer, we have no possibility whatsoever to explain *its* truth. We simply postulate a brute explanatory connection without earning our right to do so. While arguing in favour of $\mathbf{M}_2$, Mulligan was *presupposing* that he is, in the same way as Künne, entitled to $\mathbf{M}_1$. But he is not.

But what is so bad about biting this bullet? Indeed, Mulligan (2004) has recently argued from the absence of an explanation for $\mathbf{M}_1$ to the failure of Husserl's account of modification. The latter 'cannot get off the ground', he says, because

> It is obvious that (The proposition that Sam is sad is true because Sam is sad) because… cannot be completed so as to yield a truth by any sentence referring to the essence of what 'Sam is sad' refers to. Similarly, no essential ground of the inference ['Sam is sad. Therefore, the proposition that Sam is sad is true.'] is forthcoming. (2004, p. 407)

In the light of the foregoing, this criticism can be met: what grounds the truth of $\mathbf{M}_1$ is the essential fact that 'Sam is sad' has the meaning it actually has, viz. that Sam is sad. So, even if the T-schema is true because of facts about truth and the nature of truthbearers, this does not yet settle the question of the relation of the explanatory dependence between its left-hand side and right-hand side. Philosophers of a realist persuasion, however, may appeal to other considerations to settle the matter: It is because truth depends on the world, in its broadest sense, that (**r2l**), but not (**l2r**), is true—because only in the first, but not the second case what comes after 'because' may serve as a *truthmaker*.

We thus arrive at a double conclusion: Künne is right that an account of truth goes in tandem with an account of truthbearers and right to resist the invitation to do away with this ontological commitment by turning 'operationalist'. Accepting truthbearers that have their meaning essentially in addition has the advantage that one earns the right to $\mathbf{M}_1$, i.e. to an explanation of the Aristotelian equivalence. In order to *explain* $\mathbf{M}_1$ (and not just to assert it), however, one has to go further and accept a real relation, underwriting the explanation of truth: truthmaking. Rather than trying to have truth without truths, as Mulligan would have it, or having truthmaking without truthmakers, as is Künne's intent, we should be staunch realists about all four of them: truth, truths, truthmakers and truthmaking. As Mackie has said about his version of the 'modest account' (cf. n. 14 above):

> The word 'true' is here eliminated, but truth is not eliminated but displayed: the *relation* in which it consists is made clear. (1973, p. 52, my emphasis)

[20] This is only part of the explanation. For reasons I sketch at some length in my 'Truthmaking is explanation by things', I think that 'truthmaking without truthmakers' is not truthmaking at all.

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Chapter 18
Because

Achille C. Varzi

For Kevin, who knows it all

Abstract There is a natural philosophical impulse (and, correspondingly, a great deal of pressure) to always ask for explanations, for example, explanations of why we act as we do. Kevin Mulligan has gone a very long way in disentangling the many different because's, and the many senses of "because," that tend to clutter our efforts to manage that impulse. This short dialogue is meant as a humble tribute to his work in this area, and to the unique pleasure that we all feel when we engage with him in actual philosophical debating (on any topic).

Keywords Action · Explanation · Reason · Motive · Desire

Ali What are you doing?

Baba Don't you see? I'm reshelving our books. I'm putting the yellow-covered books on the shelf where we had the brown-covered ones, and the brown-covered books on the shelf where we had the yellow-covered ones.

Ali And why are you doing that, if I may ask?

Baba Pardon me?

Ali Why are you moving our books around that way?

Baba I'm not sure I understand. I am just moving them—period. See? I've already taken them all down and now I only have to put them up again. These will go there, and those will go here.

Ali But surely you are doing that for some reason…

Baba Not at all. Are you telling me that I can only do something if I have a reason?

Ali Precisely!

Baba ?

Ali All right, there are things we do without a reason, like sneezing, hiccuping, falling asleep and waking up, or tripping over something. But those are not

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really things we *do,* they are not actions, for they are not intentional. Intentional actions are always driven by a motive. And surely you are reshelving our books intentionally.

Baba If by "intentional" you mean to say that there is an intention, an intending, then of course you are right. But I am telling you that I have no intention except for this: I intend to put the yellow-covered books where we had the brown-covered books—and vice versa.

Ali That makes no sense.

Baba If you really insist, I can tell you that I am moving them because I *want* to move them. That's my motive.

Ali But *why* do you want to move them?

Baba You are never happy, are you? Now you are asking me to give you a reason, not only for my actions, but also for my volitions?

Ali You can't just say that you are doing something because you want to do it without explaining why you want to do it!

Baba Listen, Ali, I realize I'm disappointing you. But I don't have much time and I still have lots of books to move…

Ali Those are not just *your* books. I have the right to know.

Baba Let me put it thus: I want to move the books because…because then the books with the yellow cover will be above those with the green cover, and the ones with the brown cover above those with the blue cover. Are you happy now?

Ali No, because that is not a reason. If anything, it's your goal. But a reason cannot be a goal; a reason must qualify as a cause of the action, not an effect.

Baba Is it supposed to be a cause because it is a reason, or a reason because it is a cause? Anyway, if all you were asking for was a cause, you should have said so at the beginning. The cause, i.e., the reason why I am moving our books in the way I described, is that at some point, this morning, I felt like doing just that. Okay?

Ali Sorry, I didn't quite put it that way. Surely not every cause of an action counts as a reason for acting that way. I said that the reason must be a cause. I can try to be more precise: The reason of an action is the desire to realize or achieve a certain purpose.

Baba That can't be right, either. Don't you think that in some cases our reasons lie, not in our desiring something, but in the value we attach to it? I hate going to the gym, but I do so nonetheless because I know that exercising is good for me. I heard many philosophers argue that way.

Ali Let's stick to the desire-based account.

Baba Fine with me. Right now, my greatest desire is precisely to have our books arranged in the way I told you.

Ali But that desire is utterly ungrounded!

Baba Give me an example of a better grounded desire. I'm telling you, I'm *dying* to have our books arranged that way.

Ali Let's see…I desire a new job. And this desire is grounded in my being unhappy with my current job, and in my thinking that a different job would improve the quality of my life. (You are right; maybe this is where values enter the picture.)

Baba Very well. My desire is that the yellow books be above the green ones and the brown books above the blue ones. And this desire of mine is grounded in the fact that I am unhappy with the current arrangement, and in my thinking that the new arrangement will improve the quality of my life.

Ali But *why* would it improve the quality of your life?

Baba What do I know? I guess I just like certain states of affairs better than others. They make me feel more comfortable. That's all. Is there anything more to your thinking that a new job would improve the quality of your life?

Ali I would have a decent salary and more free time, and I could use that time to do the things I truly enjoy, and…

Baba Exactly.

Ali Really, you don't see any difference?

Baba None whatsoever. I appreciate that we may have a natural impulse to trace back through the chain of our because's. But surely we must stop at some point. Suppose I want to make you a present. I could explain that I intend to do so because I want to make you happy, and I might add that I want to make you happy because I love you. But now you can't pretend that I also explain why I love you. I don't love you for a reason. I love you—period.

Ali *Touché.* You know I wouldn't ask for more.

Baba Of course, I could still add that I love you because it is true that I love you. And it is true that I love you because <I love you> is true. And…

Ali Thank you, but now you are digressing. Those are not the sort of "because" I was looking for. Besides, you've got it the wrong way around. At best, <*p*> is true because it is true that *p* (it is the connective that wears the trousers), and it is true that *p* because *p*. My question is, why *p*?

Baba And I told you: I love you because I love you. I thought you were pleased with my answer.

Ali I am. But you can't generalize. You can't always say, *p* because *p*. That's called the "because" of the exasperated adult.

Baba I'm not saying that we should always leave it at that (though I never thought I would care). I'm saying that eventually we get to a point where there's nothing else we can say. You seem to agree with that. You are happy enough if I tell you that I love you, without offering any further explanation. Why should it be different with the books?

Ali You are asking me why?

Baba Listen, I have no time for your *tu quoque*. Just tell me what difference you see between the two cases.

Ali Well, for one thing, I would not say that loving someone is an action. But never mind. I simply don't think that your love for me should be on a par with your silly craving to have the books arranged on the basis of the color of their covers! Tell me it isn't.

Baba And if I told you that I am craving to rearrange the books that way because I thought that it would make *you* happy? I suppose that wouldn't help…

Ali On the contrary, that would help a lot. Trying to make me happy would be a perfectly good reason (and I would say the same if you told me something else along those lines, for instance, that you thought it would make Sam happy).

Baba And you would not ask me *why* I thought that moving our books around that way would make you (or Sam) happy?

Ali I suppose I could. But knowing *that* would not be necessary to make sense of your current action, Baba—to see it as a genuine intentional action. What you said would be enough, provided it were true.

Baba I'm so relieved! Then I'll say just that. Forget Sam, Ali. (Who's he anyway? I always wondered.) *I'm reshelving the books because I thought it would make you happy*. Final answer.

Ali You see that it wasn't a waste of time? I like it when we manage to sort out our views like this.

Baba I know you do. And you know I like it too, despite my attitude.

Ali Of course, to tell the truth, it wouldn't *really* make me happy to have the yellow books above the green ones and the brown books above the blue ones. You see, I think I'd much prefer it if the yellow books were *below* the green ones and the brown books *next* to the blue ones.

Baba (*visibly disappointed*) I see. And why so, if I may ask?

Chapter 19
Why Metaphysicians Do Not Explain

Ingar Brinck, Göran Hermerén, Johannes Persson and Nils-Eric Sahlin

Abstract This chapter discusses the concept of explanation in metaphysics. Scientific explanation is compared with (alleged) metaphysical explanation. The comparison illustrates the difficulties with applying the concept of explanation in metaphysics.

Keywords Blanket theory · Conceptual explanation · Deductive-ontological explanation · Mechanistic explanation · Metaphysical explanation

We explain in science. We explain in everyday life. But do we explain in metaphysics? This chapter argues that we should not help ourselves to an affirmative answer—at least, not without a good deal of hesitation. However, as we shall make clear later on, denying that we explain in metaphysics does not imply that there are no metaphysical explanations.

19.1 What Is an Explanation?

Most of the time, we generate potential explanations rather swiftly. The window broke because I kicked the ball in the wrong direction. I went to the shop because I believed it was open and I intended to buy food there. 'Why is he walking about?'

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Aristotle asked, then answering ‘To be healthy’. At other times, potential explanations are harder to generate because we know too little about what could possibly explain, even potentially, a certain explanandum. Perceived paradoxes illustrate this. It was difficult to come up with a potential explanation of the fact that, despite striking nutrient deficiency, a number of species of plankton are known to coexist in the summer. In these cases, it is the content rather than the concept of explanation we find ourselves in trouble with.

But sometimes we face conceptual problems as well. Are the three potential explanations mentioned above explanatory in the same sense? If not, does each require its own peculiar model of explanation? Many think of the three as exemplifying different varieties of explanation. The first is arguably a causal, the second is intentional and the third is functional, of the teleological kind. Are these varieties fundamentally different? The full passage from Aristotle suggests they are not:

> ‘Why is he walking about?’ we say. ‘To be healthy,’ and, having said that, we think we have assigned the cause. Aristotle (Physics, II.3.194B31)

This is somewhat ambiguous since it is not clear whether Aristotle believes we have rightly or erroneously assigned the relevant cause. However, we shall assume he means the former—that the assignment is accurate. In incorporating final causes, Aristotle’s account of causation differs from most causal theorising today. The example nevertheless indicates the interconnectedness of the three varieties.

Our claim is not that causal, intentional and functional explanations are always acceptable to science or in everyday life. We do not wish to claim this even when the explanations are ‘actual’ in Hempel (1965) sense. Many examples from various disciplines would disprove such a claim. In psychology, intentional explanations are sometimes rejected because the kinds of belief and desire referred to in the explanans of this variety are not considered natural kinds. This argument is but one of the problems discussed. Even the notions of belief and desire themselves face that kind of critique.

Teleological or design function is sometimes used in developmental psychology to account for behaviour in terms of its intended goal, i.e. the effect the subject seeks to achieve by performing the behaviour successfully. It is very difficult, not to say impossible, to establish conclusively whether a given teleological interpretation of behaviour is correct. This is why, generally, interpretations referring to observable use or operative function are preferable to those couched in terms of desired effect. For example, contemporary explanations of nonverbal pointing in human infants in terms of what the act is meant to achieve establish the existence of several distinct types of pointing behaviour. Yet, that these types seem to depend on similar skills and capacities suggests that they constitute variations of a single behaviour. It is reasonable to claim that pointing has one function only—the operative one of directing the observer’s attention to an object or event (Brinck 2003). Knowing the operative function allows agents to use pointing for different purposes in different contexts.

Explanations in terms of teleological function have now been banished from physics and biology. Today nobody could get away with the suggestion that rocks fall in order to assume their natural place, or that plants have leaves for the sake of

shading their fruit (Physics II, 8). (This is not to say that similar modes of thinking have entirely lost their importance in scientific practice: Here, they may well have heuristic value.) Of the three varieties, causal explanation is considered the most unproblematic; and generally speaking, functional and intentional explanations become more acceptable the more closely related to causal explanation they are. Where causal explanation is not found useful, this is typically because causation is not acknowledged as an ontological building block of the science in question. For instance, Bertrand Russell doubted that causal explanation was of use in physics (see, Ladyman and Ross 2007, for a recent continuation of that line of thought).

Building on the widespread view that causal truths of the form 'a caused b' entail associated laws of nature, causal explanation has been conceived of as a special case of the most well-known model of explanation—the deductive-nomological model. In this model, an explanandum is potentially explained when it is derived from a set of premises including at least one law of nature.

Another widely indulged set of assumptions links causal explanations to mechanisms. This is especially clear in cases where we seek to explain regularities. For instance, causal explanations are often implicitly mechanistic when we provide explanatory accounts of established effects in psychology. An example is the white male effect in risk perception research. Risks tend to be assessed as lower by men than they are by women, and similarly as lower by white people than they are by people of colour. A study conducted in the USA showed that the overall effect here is generated by 30 % of the white male population, who judge risks to be extremely low. This has led researchers to suggest that sociopolitical, rather than biological, factors explain the effect (Finucane et al. 2000). Another example, from a totally different field, concerns smoking. Half a century ago, Hill (1965) examined the cogency of argumentation in which a move is made from an association between smoking and lung cancer to a causal relation between them. In his list of 'criteria' legitimising such a shift, he focused on the biological plausibility of this causal relation. In other words, he asked whether or not a suitable biological mechanism for the effect had been identified.

19.2 Explanatory Relata

Prepositions are at the root of a great deal philosophical muddle. 'What is the meaning of life?' has bewildered an army of thinkers; the question 'what is of meaning in life?', on the other hand, can be answered by a child—ice cream, visits to the seaside, viewings of The Lion King. Also, when it comes to explanations we must mind our prepositions. For example, explanations in mathematics are one thing; explanations with mathematics, something else.

Many explanations in physics make use of mathematics (Rivadulla 2005). We can, for example, use mathematics to explain hydrogen's spectral line distribution, to explain, in turn, differences in time delays between electrons emitted from the $3s^2$ and from the $3p^6$ shell at different excitation energies (Klünder et al. 2011).

In like manner, we use mathematics (together with scientific principles) in explanations in biology, economics, medicine and psychology. Nonlinear differential equations are used to explain the interaction between predator and prey (the Lotka–Volterra equation); Euler's formula is used to explain savings strategies (Ramsey 1928); in medicine, we use mathematics to explain the exchange of water and small and large solutes across the peritoneal membrane in peritoneal dialysis (Rippe and Levin 2000); and we use the theory of conjoint measurement to explain human idiosyncratic decision making (Kahneman and Tversky 1979).

But what is a mathematical explanation in mathematics? Scientists give causal explanations, and mathematics is a useful tool. But do mathematicians explain? In a recent paper, Betti (2010, p. 4) says:

> …mathematical explanations are non-causal. Surely mathematics is worth its name as a science as much as physics is? If so, explanation in mathematics is a legitimate form of scientific explanation as much as explanation in physics is.

This seems to presuppose that physics and mathematics are both sciences, and that, since physics explains, mathematics also explains. This way of thinking is based on the assumption that the only thing that distinguishes science from nonscience is that science explains.

Mathematicians prove propositions, theorems and lemmas. Their proofs are demonstrations, not explanations. Proofs are a combination of axioms and definitions and of theorems and lemmas. There are, of course, many types of proof—for example, proofs by induction, by example and by contradiction, and nonconstructive proofs. All, however, are demonstrations of necessary truths. Mathematicians do not give, as Betti correctly observes, causal explanations; nor do they give functional or intentional explanations, simply because they do not explain anything, i.e. they do not introduce new (qualitative) information. And, we want to add, you do not have to be in the business of explaining to be a scientist.

Certainly, mathematicians can use examples from everyday life to help us understand. But that is explanation at a different level—the examples are pedagogical.

Do conceptual reformulations and innovations count as explanations? A new conceptual framework means new proofs, that we understand things in a completely new way (Mancosu 2008). However, Betti rather sides with Peirce (1957a), who describes conceptual explanation in mathematics as a form of analytic truth that does not reveal any new empirical facts. Peirce held that mathematical demonstration is a form of deduction consisting in the application of a general rule to a particular fact: What is already known (the rule) is used to explain the consequences of the fact.

Betti says:

> Mathematical explanations are conceptual explanations, namely connections among propositions resting on the properties of some concepts. This means that explanation in mathematics and conceptual explanation in metaphysics do not just cross paths: they are one of a kind. (5)

She seems to argue that mathematical and metaphysical explanations provide only conceptual knowledge that demonstrates what is already (in principle) known.

Betti discusses three types of explanation: causal, metaphysical and conceptual. Her examples are: (Causal) Socrates is pale because he is scared to death; (metaphysical) 'Socrates is pale' is true because there exists a trope of paleness in Socrates and (conceptual) Socrates is pale because he is a white guy with skin-type I.

As Betti points out, in all three cases, we have a two-place relation, but in each case, there is a distinctive pair of relata. In the first case, two objects are related; in the second, an object and a truth; and in the third, two truths. The idea, to take just one example, is that the causal explanation is true if and only if there is a causal relation between the relevant objects.

In Hume's opinion an object 'is as perfect an instance of cause and effect as any which we know, either by sensation or reflection' (1739–40, Abstract, 649). This reminds us of what Betti says. But are objects the only relata of causation, the only thing we need to explain? Socrates falls because he is tired. Is this a causal report with one object—Socrates? His tiredness is not a thing, it is an event (or conceivably a process). Causation, understood as a link between objects, seems to require events.

Against this, D. H. Mellor (1995), making use of one of Frank Ramsey's arguments (Ramsey 1990), claims that events cannot function as the relata of causation. Mellor's example runs as follows: Don manages to hang on when his rope breaks, and so does not die, because he does not fall. This looks as causal as when (a week later) Don dies because he falls. The problem for the event—causation view, according to Mellor, is that while 'Don does not die because he does not fall' reports an instance of causation, it also seems to assert that the nonexistence of one event is produced by the nonexistence of another. Since nonexistent objects are as problematic as nonexistent events, this argument is effective against object causation too.

The specification of relata is central in the construction of a theory of causation, and hence in any theory of (scientific) explanation. What then can the relata of causation be? Again, following Mellor, the fact that Don survives is caused by the fact that he manages to hang on. And the fact that he does not survive is caused by the fact that he does not manage to hang on when the rope breaks. Facts seem to solve the problem with 'negative' reports. But if 'negative' facts are but conceptual tools, they cannot function as reinforcing bars in the world. In this respect, facts are as badly suited as events to be the fundamental relata of a causal relation.

The problem is that causation needs to relate more than one type of entity. Moreover, causation may not be a relation at all. It may be thought of as a structure, or a mechanism, or as the manifestation of nomic facts or laws in space–time (Persson and Sahlin 1999).

All this is important, because the difficulties outlined above—concerning the relata of causation and the dubious status of the causal relation itself—show that scientific explanations are imbued with metaphysical ideas and ontological assumptions. Scientific explanations are, at least partly, metaphysical. This means that we need to ask if the relata of metaphysical explanations are the same as their scientific counterparts. It also means that we need to consider whether the metaphysical 'because' is the same as the causal (scientific) 'because'.

Betti provides answers to these questions, but gets them wrong—or not quite right. Her third category of 'because', the conceptual case, is not an explanation but a proof or argument. She argues:

> (Conceptual) is true iff true proposition *q* follows from true proposition *p* on the basis of at least a third proposition ruling in an appropriate manner the connection of concepts involved in *p* and *q*. For example, 'Socrates is pale' (a truth) follows from 'Socrates is a white guy with skin type I' (another truth) because the concept of paleness and that of skin type I are appropriately related in a third truth, say 'human skin type I according to Fitzpatrick's scale is mostly pale in colour'.

The first part of this argument looks very much like a description of a logical or mathematical proof: *q* follows from *p* and a handful of further assumptions. The second part looks more like a definition. If Mellor's Don is a bachelor, this is because he is single and a man. True, one could say that definitions explain the meaning of a term, but there is not much explanation going on here. The definition adds no new information; it merely spells out what is already known. On the other hand, Don's being a single man and the proposition that 'a single man in possession of a good fortune must be in want of a wife' explains a great deal. Maybe even why Don finally lets the rope slip out of his hand.

Now, consider Betti's second case of 'because', the metaphysical one. Suppose there is a truth-making relation between an object in the world and a true proposition. Does this fact explain much? Does it answer any serious why-question we might have? Metaphysics is important, do not misunderstand our intentions, but talking about metaphysical explanations simply involves too much concept twisting. Nor do mathematicians explain. If successful, they prove remarkable theorems, and if they fail, they explain their mistakes, but that is another story. But do metaphysicians and mathematicians fail in the same way?

An alternative so far undiscussed is the suggestion that the deductive-nomological model of explanation can be applied in metaphysical explanations as well. We shall have to remove the requirement that the set of premises contains a law of nature. Instead, we could require the premises to contain at least one general, fundamental metaphysical principle or assumption (e.g. that there are tropes). Why not call this type of explanation 'deductive-ontological' explanation? But a model of this kind just emphasises what we already have claimed—arguments, definitions and explanations should not be confused. F. H. Bradley's regress argument, for instance, is an argument, not an explanation.

19.3 Abductive Inferences and Metaphysical Blankets

In deduction, we derive the formal consequence(s) of our premises. A deductive argument aims to show that a conclusion necessarily follows from a general rule and a set of premises (hypotheses). An inductive argument, on the other hand, grows out of individual cases. The premises of an inductive argument present support for

the conclusion but do not entail it. Deductive arguments are sound or unsound *tout simple*. Inductive arguments provide different degrees of evidentiary strength.

Peirce and many others have argued that there is a third kind of inference. In addition to deduction and induction, we make use of abduction. Abduction comes first. Induction turns the abductive result into a rule or law; we learn by induction that an abductive hypothesis is valid whereas we use deduction to clarify its consequences. Peirce sometimes referred to abductive inference as reasoning from effects to cause and sometimes as 'the operation of adopting an explanatory hypothesis' (Collected Papers 5.189). There is an intimate relation between abduction and explanation in Peirce's writings. He writes that abduction occurs when we observe some very curious circumstance which would be explained by the supposition that it is a case of a certain general rule, and thereupon adopt that supposition (Peirce 1957a). For instance, fossils that remind us of fish remains are found in the interior of the country; we suppose this land once was under water.

Niiniluoto (1999) cites the following early illustration of abductive reasoning from Peirce's 1865 Harvard Lectures:

> We find that light gives certain peculiar fringes. Required an explanation of the fact. We reflect that ether waves would give the same fringes. We have therefore only to suppose that light is ether waves and the marvel is explained. (Writings 1, 267)

From Galileo to Semmelweis, it is an easy task to locate very similar formulations in reports on scientific breakthroughs.

Peirce writes that abduction is a preference for one hypothesis over others that equally explain the facts, so long as this preference is not based upon any previous knowledge with a bearing upon the truth of the hypotheses, nor on any testing on any of them (Peirce 1957b). The hypothesis that can be tested first should be preferred. If two hypotheses can be tested immediately, economy decides: The one that costs the least in terms of time, energy and money is preferable and should be put to the test. Furthermore, the hypothesis should be internally coherent, consistent with what is known generally, reasonable and prima facie susceptible of verification.

Abduction is a fallible kind of inference. It obviously invites discussion of the circumstances under which it should be regarded acceptable. Harman (1965) and Lipton (1991) prefer talking about inference to the best explanation (IBE) instead of abduction, and this opens up the possibility of our deploying criteria other than Peirce's original ones. The question is: What is gained by subsuming abduction under that heading? It may be more useful, insofar as we are trying to understand the many varieties of scientific reasoning, to keep the two notions separate.

IBE relies on the comparison of competing explanations relative to a set of pragmatic principles or norms that determine what counts as a good explanation in scientific practice. Abduction, by contrast, is not in this sense a normative notion. It does not depend on preconceptions about the characteristics of a good hypothesis—except, that is, testability. Peirce simply suggests that we should pursue the hypothesis that can readily be tested. We need not speculate about which virtues of explanation identify the hypothesis that is most likely to be true.

IBE puts explanation in the front seat. Whatever version of IBE we assume, and whatever merits it has, it will be such that it can be applied only in situations where: (a) at least one of the hypotheses to be selected from is, potentially, a satisfactory explanation; (b) we are capable of selecting one or a few hypotheses from several possibly satisfactory explanations; (c) the best explanation is good enough. Hence, it is clear that not only the content but also the very concept of explanation in play is an important guide to the cases in which we are prepared to infer to the best explanation (e.g., see, Lipton 1991; Bird 1999; Persson 2007).

As will be discussed below, many of the abductive features that make an explanation a good one are virtues in nonexplanatory contexts as well. That an inference is neither inductive nor deductive does not entail that it is an instance of IBE—it may be another nonexplanatory kind of abductive inference.

Are there IBEs in metaphysics? Hochberg's (1970) blanket theory tells us that explanations in metaphysics are not deduced:

> Just as one takes a descriptive singular statement to be deduced from a law and a description of initial conditions, one might think that a metaphysical thesis follows from statements of fact and explicitly stated principles. However, what is deduced, in such a case, is not a description, in an ordinary sense, of the fact to be explained, but something that plays the role of the covering law in the scientific explanation, i.e. a thesis. Thus, the analogy would be more apt if we think in terms of trying to fit a purported law to a set of facts in conformity with certain rules (about simplicity, minimal hypotheses, etc.) and other hypotheses. In short, the pattern is more like an inductive than a deductive one.

Interestingly, Hochberg's delineation of metaphysical explanation is strongly reminiscent of IBE. If he is right, Betti is wrong: Metaphysics can generate genuinely new knowledge.

Peirce emphasised that abductive hypotheses are not worth much unless they can be tested and until the explanations they provide are corroborated by further facts. Most philosophers think that metaphysical hypotheses cannot be empirically tested, and we agree. The question is whether, in spite of this, metaphysics can produce the right kind of test—one that would show that metaphysics does provide genuine explanations and not merely a set of hypotheses, interesting yet incapable of verification. What might the criteria of adequacy be for metaphysical explanation considered as IBE?

19.4 Explanation in Metaphysics?

The difference between metaphysics and science is often exaggerated. It must be remembered that science is inevitably based on ontological assumptions. There are also striking similarities between the criteria of adequacy in situations when we choose between different metaphysical and different scientific assumptions.

Compare, for example, Carnap's physicalism with a solipsistic theory, or Goodman's nominalism with a Platonistic theory assuming the existence of both properties and relations. Simplicity is obviously a desideratum, albeit one in need of

clarification. A radical nominalistic theory is simple in the sense that it only assumes the existence of one sort of entity. But it will very soon lead to complicated constructions when we try to reconstruct classes and so forth. Completeness is, of course, another desirable. Can we, in the metaphysical theory, capture all we want to say and do say in everyday life and science? Fruitfulness is another criterion of adequacy. Can the metaphysical theory we construct yield interesting and illuminating results when applied to other problems or areas? A pragmatic aspect enters the picture. Consistency is an obvious merit of explanations, both in metaphysics and science.

A special problem arises when we have a choice between two competing metaphysical constructions satisfying these criteria in different degrees. Against some criteria, the first construction gets an α and the second gets a β; against others, the first construction gets a β and the second gets an α. But even more important is perhaps the general conclusion, or realisation, that if a particular scientific explanation and a particular metaphysical theory were both to satisfy these and similar criteria of adequacy, it would still not follow that both are explanations.

Another way of expressing this worry is highlighted by the possibility that there can be several kinds of explanation at work in cases like these. To borrow one of Kevin Mulligan's helpful examples, suppose that we have what appear to be two competing metaphysical explanations of similarity:

> Anti-Nominalists say:
> If x and y are similar that is because they share a property.
>
> One type of nominalist says:
> If x and y share a property that is because x and y are similar.

As metaphysical explanations, these would clearly be incompatible. But if the nominalist were to refer to a lot of fruitful consequences for a complete theory of similarity as evidence in favour of his explanation, then his view would perhaps not be in competition with the metaphysical explanation of the anti-nominalist any longer. It would no longer be evident that both explanations were metaphysical explanations.

Humpty Dumpty sought to foist upon a sceptical Alice the delusion that the fundamental question of meaning is 'which is to be the master'. And you can, of course, make the word 'explanation' stand for whatever you like. But clarity matters. Concepts are analytical tools. If we want to understand the methodological principles of metaphysics, we should resist Dumpty rhetoric. It is not a good idea to borrow concepts imbued with the empirical view of science and use them to analyse metaphysics. Instead, let us take the methodological questions seriously and ask: What do (or should) the metaphysicians do?

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Chapter 20
Science and Metaphysics: The Case of Quantum Physics

Michael Esfeld

Abstract The chapter argues that doing metaphysics requires taking science into account and that doing so implies going as far as to take a stance on what the appropriate formulation of the scientific theories in question is. I illustrate this claim by considering quantum physics. The famous measurement problem teaches us that answering the very question of what the appropriate formulation of quantum mechanics requires employing the conceptual tools of philosophy. I first set out a general metaphysical framework that applies to all the different formulations of quantum mechanics (namely a certain sort of holism), then consider the three different types of solution to the measurement problem and finally conclude that despite appearances to the contrary, Bohm's theory still stands out as the best candidate for an ontological interpretation of quantum theory.

Keywords Quantum mechanics · Measurement problem · Non-locality · Bohmian mechanics · GRW theory

20.1 Introduction

Metaphysics in the Aristotelian sense is not concerned with entities that are supposed to exist beyond the physical world, but with the fundamental traits of the physical world itself. That is why the treatise known to us as Aristotle's *Metaphysics* was ranged behind his *Physics*. Metaphysics in this sense cannot be done without taking science into account. Indeed, since its beginning in the Presocratics, metaphysics has been tied to science, and if people like Plato, Aristotle, Descartes, Hobbes, Leibniz, etc. set the paradigm for what philosophy is, it is evident that there is continuity between science and metaphysics. Separating metaphysics from science either leads to logically refined but empty speculations about what are supposed to be possible worlds—a tendency in some quarters of today's analytic metaphysics that is with good reason criticized by Mulligan et al. (2006)—or leads to abandoning philosophy and doing something else, such as history of ideas or analysis of language.

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How does one take science into account when doing metaphysics? A common instruction is to say that when doing metaphysics, one seeks to provide an answer to the question of what the world is like under the assumption that our best scientific theories are—at least approximately—true. However, it is not evident why one needs philosophers to answer that question. Answering that question rather is what scientists are expected to do, what they are employed for by the general public via institutions such as universities, namely to find out the truth about the world. If the public, via the media, wants to know what the latest view of the world is that, say, physics provides, they of course invite physicists and not philosophers to answer that question. One may reply that the task of metaphysics is to develop a view of the world as a whole, whereas scientists have only their particular field of expertise in view. But it is not obvious why philosophers are needed to do that: A good TV moderator should be able to establish a dialogue between scientists from different fields so that in the end they come up with a coherent view of nature as a whole.

The problem with the instruction that one takes science into account when doing metaphysics by formulating an answer to the question of what the world is like under the assumption that our best scientific theories are—at least approximately—true is that there is no straightforward answer to that question. If there were, we could indeed go back to the days of logical empiricism and envisage redefining philosophy as a subdiscipline of science, namely as the one that is concerned with the logical analysis of scientific theories, or simply follow James Ladyman when he proposes to let science speak for itself (e.g. Ladyman 2010). Ladyman is right in branding a widespread tendency in today's analytic metaphysics that sets out to take science into account, but fails to do so in limiting itself to mentioning oversimplified and outdated examples from classical physics instead of engaging with real science (Ladyman and Ross 2007, Chap. 1). Nonetheless, he throws the baby of metaphysics out with the bathwater when he suggests that science speaks for itself.

There is no straightforward answer to the question what the world is like under the assumption that our best scientific theories are—at least approximately—true, for in setting out to answer that question, one has to take a stance on what the appropriate formulation of the scientific theory in question is. One cannot simply read the theory in question off from textbooks, from experimental data or from anything with which scientists deal in their daily business. One has to settle what the appropriate formulation of the scientific theory in question is by employing the conceptual, philosophical tools of argumentation in elaborating on the options in a clear and precise manner and laying out their consequences. That is why science needs philosophy and, more generally speaking, our society needs philosophy when it wants science as an enterprise that seeks to find out the truth about the world. But, that also means that doing metaphysics in the Aristotelian sense requires engaging with science itself, as it was in the days of Aristotle, Descartes or Leibniz. It furthermore means that philosophy is not limited to professional philosophers. There is for instance no reason not to count Albert Einstein or John Bell among the important philosophers of the twentieth century, since their contributions to the foundations of space–time physics and quantum physics clearly live up to the standards of conceptual precision and clarity that David Lewis has established for analytic metaphysics.

In short, there is continuity between science and metaphysics, since metaphysics is already needed when it comes to the appropriate formulation of the scientific theories themselves.

In the following sections, I shall consider the most obvious case to establish this claim, namely quantum mechanics. But similar considerations, albeit to a considerably less radical extent, apply to all the other major physical theories as well and also to many of the special sciences. To keep the chapter brief and to the point, I have to grossly simplify; but all the points I will make in the following can be backed up by extensive argument in the existing literature.

20.1.1 The Quantum Measurement Problem

The formulation of quantum mechanics poses a problem that is known as the measurement problem. Consider the following conceptualization of this problem by Tim Maudlin:

> 1.A The wave-function of a system is *complete*, i.e. the wave-function specifies (directly or indirectly) all of the physical properties of a system.
> 1.B The wave-function always evolves in accord with a linear dynamical equation (e.g. the Schrödinger equation).
> 1.C Measurements of, e.g., the spin of an electron always (or at least usually) have determinate outcomes, i.e., at the end of the measurement the measuring device is either in a state which indicates spin up (and not down) or spin down (and not up). (Maudlin 1995, p. 7)

The problem is that there can be no formulation of quantum mechanics that respects all three of these claims, because their conjunction is inconsistent: If the wave-function yields a complete description of the dynamical properties of a physical system and if it always evolves according to a linear dynamical equation, then it is in general impossible that it evolves such as to represent a quantum system as having a determinate value of a dynamical property, such as a definite position or a definite value of spin, and a measuring device as indicating such a determinate value. We therefore have to give up one of these claims. Justifying which one of these claims is to go requires employing the conceptual tools of philosophy.

Note that the notion of measurement is immaterial to the formulation of this problem. There is no physical definition of what a measurement is and it is impossible to give one: Measurement interactions are not a special type of interactions in addition to the strong, the weak, the electromagnetic and the gravitational interactions, but are simply ordinary physical interactions; and measuring devices are not a natural kind in addition to electrons, protons, the chemical kinds, biological species, etc. Any macroscopic system capable of amplifying the properties of quantum systems can, on a given occasion, be used as a measuring device. One can therefore replace claim (1.C) above with the following, more general, but slightly more complicated claim:

> 1.C* The macroscopic systems with which we are familiar—such as tables, chairs, trees, cats, people and the like—always (or at least usually) have definite positions in space, and these systems are composed of microscopic quantum systems.

Consequently, quantum systems must at least sometimes have positions that are definite enough so that they can compose macroscopic systems that have definite positions. But if the wave-function specifies all the properties of quantum systems and if the wave-function always evolves in accord with a linear dynamical equation, it is in general impossible that quantum systems have positions that are definite enough so that they can compose macroscopic systems that have definite positions.

Let us briefly consider why quantum mechanics runs into this problem. The reason is the superposition principle. If, for instance, spin up and spin down are the two possible determinate values of the spin of an electron in any of the three orthogonal spatial directions, then quantum mechanics, by contrast to classical mechanics, allows not only states in which the electron has either spin up or spin down in a given direction but also states in which both these values are superposed. In fact, such states are inevitable in quantum mechanics. If, for example, the electron is in a state in which it either has spin up or spin down in the *x*-direction, then this is a state in which it cannot have a determinate value of spin in the *y*-direction and in the *z*-direction; with respect to the *y*-direction and the *z*-direction, its state is a superposition of the values spin down and spin up. Suppose now that one sets up a device to measure the spin of the electron in the *z*-direction. Then, if the dynamics of the quantum system always evolves according to a linear equation such as the Schrödinger equation, there is no possibility that the system will ever go into a state in which it has a determinate value of spin in the *z*-direction indicated by a measuring apparatus. But, it is of course possible to make such measurements, and they have outcomes; the apparatus indicates either the value spin up or the value spin down at the end of such a measurement. A similar remark applies to all the other dynamical properties of quantum systems, notably their position in space.

When one considers two (or more) quantum systems that interact with each other, the situation becomes even more intriguing. The states of the two systems rapidly become entangled so that neither system has a determinate value of any of its dynamical properties. But there are certain correlations between the possible determinate values of the dynamical properties of the two systems, and these correlations remain whatever the spatial distance between the two systems may be in the future. Consider two electrons that are emitted together from a source in what is known as the singlet state and then become separated in space. Neither of them has a determinate value of spin in any direction, but there are correlations between them such that if one system acquires the value spin up in a given direction, the other system acquires the value spin down in that direction (and vice versa), whatever the spatial distance between the two systems may be. These correlations are well confirmed by experiments in which the two measurements are separated by a space-like interval. Consequently, these measurements cannot be connected by a signal that propagates at most with the velocity of light. The first of these experiments were carried out by Alain Aspect and his collaborators in Paris at the beginning of the 1980s (Aspect et al. 1982) and subsequently improved notably by the experiments performed by the group of Nicolas Gisin in Geneva (e.g. Tittel et al. 1998).

The theorem of John Bell from 1964 (reprinted in Bell 1987, Chap. 2) proves that it is not possible to account for the correlations that quantum mechanics predicts

and that are well confirmed by these experiments on the assumption that these correlations are due to a common cause in the common past of the correlated measurement outcomes, such as the preparation of the pair of electrons in the singlet state at the source of the experiment. That is the famous *non-locality* of quantum mechanics: The probabilities for certain measurement outcomes to be obtained at a certain space–time point are not completely determined by what there is in the past light-cone of that point; quite to the contrary, events that occur at points separated by a space-like interval from that point contribute to determining the probabilities for what happens at that point. Thus, the outcome of a spin-measurement on the one electron changes the probabilities for the outcome of a spin-measurement on the other electron, although both electrons are separated by a space-like interval (see, Maudlin 2011 for a detailed analysis of this non-locality as well as Norsen 2009; Seevinck 2010 for up-to-date discussions of the implications of Bell's theorem).

20.2 A General Ontological Framework for Any Solution

A first step in a philosophical analysis of this situation is to enquire whether there are conditions that any account of quantum non-locality—and thus any solution to the measurement problem—has to respect in order to have a chance to succeed. At first glance, it may seem that admitting an interaction that propagates instantaneously over arbitrary distances in space is a general condition that any account of quantum non-locality has to endorse—so that quantum non-locality compels us to reintroduce the commitment to action at a distance that Newton's theory of gravitation implied and that Einstein's theory of general relativity subsequently banned from physics. Einstein's vision of a physics free of action at a distance would thus have been rather short lived. But this is not so. No attempt of an explanation of these correlations in terms of action at a distance has been pursued seriously in the literature (this option is mentioned in Chang and Cartwright 1993, part III, without being worked out or endorsed).

Reintroducing Newtonian action at a distance in order to account for the correlations between the space-like separated outcomes in a Bell experiment is attractive at first glance, since it seems obvious that, given their separation in space, the two quantum systems are separate entities in the sense that they have a state each independently of one another. To put it differently, if they were separate entities in this sense, such action at a distance would be the only way to account for the correlations. To be precise, one could also stipulate a signal that travels backwards in time, changing *after* the measurement the initial state at the source of the experiment (see, Price 1996, Chaps. 8 and 9). However, even more severe objections apply to this proposal: It implies not only closed causal loops (see, Berkovitz 2008) but also a coordination—or conspiracy—between the choice of the parameter to be measured on the system and the *past* state of the system at the source of the experiment, thus contradicting a presupposition of *any* experimental science. Consequently, if one considers action at a distance and retroactive causation to be dead ends, this means

that the presupposition of separate states of the two quantum systems has to go. We thus get to acknowledging a certain form of *non-separability* and hence a certain sort of *holism* (Teller 1986): Although the two quantum systems can be separated by an arbitrary distance in space, they remain connected by certain correlations that do not supervene on properties that belong to each of the two systems independently of the other one (that is, intrinsic properties). Consequently, it is not possible to attribute to each of these systems taken individually a state that completely specifies its properties.

This non-separability is what is new in quantum theory. It contradicts Einstein's central idea implemented in the special—and also in the general—theory of relativity, according to which all the variables that are relevant to what there is at a given point in space–time are situated in the past light-cone of that point (see, Einstein 1948 for a clear statement). However, in contrast to what Einstein thought, this contradiction does not mean that we are forced to make a step backwards in readmitting Newtonian action at a distance. In recognizing non-separability, one makes a step forward to introducing a certain sort of holism in the philosophy of nature, leaving behind the philosophical atomism based on classical mechanics and classical field theories.

The position known as *ontic structural realism* in today's literature (Ladyman and Ross 2007, French (2014)) can be considered as providing an ontological framework that seeks to make this holism precise. A structure can in this context be regarded as a network of concrete physical relations (such as the mentioned quantum correlations) that do not supervene on intrinsic properties. There is no need to waive the commitment to objects in this context, as the position known as moderate ontic structural realism makes clear (Esfeld 2004; Esfeld and Lam 2008, 2011): Of course, if there are relations, there are objects as that what stands in the relations, and these objects exist in some way or other—that is to say, they have some intrinsic properties or other. However, the manner in which each of these objects develops in time depends on the way in which it is related to all the other objects, that is, on the relation it bears to all the other objects, which does not supervene on its intrinsic properties. Thus conceived, ontic structural realism is an ontological framework suitable to accommodate quantum physics, whatever interpretation—and hence whatever solution to the measurement problem—one endorses.

Recognizing this holism or non-separability requires, *pace* Mulligan (1998), to admit what Mulligan calls "thick relations" in one's ontology. This *Festschrift* would be a good opportunity to continue the discussion with Kevin Mulligan about the metaphysics of relations. However, my aim here is a methodological one, namely to convince the community of those who pursue serious metaphysics that doing so requires engaging with science itself, and such an engagement goes farther than seeking to formulate a general ontological framework that any concrete interpretation of a given scientific theory has to satisfy; for these concrete interpretations can nevertheless radically differ in their ontological commitments. Therefore, if one is to make progress in obtaining truth about the actual world, one has to enter the business of developing such a concrete interpretation, and that requires taking a stance on the formulation of the scientific theory itself based on employing the

argumentative tools of philosophy. Let us thus come back now to the measurement problem and see how the sketched general ontological framework works when it comes to developing a concrete and precise solution to this problem. Given that the problem consists in the fact that the conjunction of three prima facie plausible propositions is inconsistent, we have to consider three types of solutions.

20.3 Many Worlds?

As mentioned above, the term "measurement problem" is misleading: This problem has nothing to do with measurement in particular. It concerns the empirical content of quantum mechanics. One can take (1.A) and (1.B) in the quotation from Maudlin above to express the bare formalism of quantum mechanics. But the conjunction of (1.A) and (1.B) implies that (1.C) is false. Hence, the bare formalism of quantum mechanics is not able to accommodate facts about the localization of objects in physical space, such as the pointer of a measuring device pointing upwards instead of downwards. It thereby has no empirical content, since it does not yield any propositions about observable phenomena (see, Albert 1992, Chaps. 1–4, for a detailed discussion of this problem). What is more, basing oneself on the bare formalism of quantum mechanics, one comes to the conclusion that there is nothing of the sort of what we take to make up the empirical content of a theory.

This is indeed the consequence that Albert (1996) regards as mandatory for any form of realism about quantum mechanics, that is, any ontology of quantum mechanics:

> …it has been essential (…) to the project of quantum-mechanical *realism* (in *whatever* particular form it takes…) to learn to think of wave functions as physical objects *in and of themselves*. And of course the space those sorts of objects *live* in, and (therefore) the space *we* live in, the space in which any realistic understanding of quantum mechanics is necessarily going to depict the history of the world as *playing itself out* (…) is configuration space. And whatever impression we have to the contrary (whatever impression we have, say, of living in a three-dimensional space, or in a four-dimensional space-time) is somehow flatly illusory. (Albert 1996, p. 277, emphasis in the original)

No one would take the high-dimensional phase space of classical mechanics to be the space in which physical reality plays itself out. The reason is that phase space bears a clear relationship to physical space: The points in $6N$ dimensional phase space represent possible states of N particles in three-dimensional space. The configuration space of quantum mechanics has $3N$ dimensions, with N commonly being regarded as the number of particles in three-dimensional, physical space. However, this space bears no such clear representational link to physical objects in three-dimensional space: Taking the wave-function developing in configuration space according to a linear, deterministic equation (such as the Schrödinger equation) to provide the complete description of physical reality even excludes that there are any objects localized in three-dimensional space. This fact opens up the possibility of adopting the stance to reject the commitment to localized objects in three-

dimensional space and to regard configuration space itself as the physical reality. The term "configuration space" then becomes obsolete: There is no given configuration of anything that this space represents. In particular, if it has $3N$ dimensions, N does not stand for any number of particles.

Nonetheless, philosophically speaking, Albert does not make the mistake of confusing the formalism of a physical theory—that is, the means a theory employs to represent physical reality—with the physical reality itself. Albert (1996) argues that any particular formulation of quantum mechanics (such as a formulation in terms of rays in a Hilbert space) does not represent or refer to a physical reality consisting in objects that exist in three-dimensional space, but represents or refers to exactly one object, namely the wave-function of the universe, which exists in a high-dimensional configuration space. Consequently, the physical reality represented by the formalism of quantum mechanics is not anything in three-dimensional space, but a wave-function in a high-dimensional space.

Hence, the metaphysics based on quantum mechanics that Albert suggests is not only opposed to the methodology of a metaphysics based on common sense but it also simply rejects common sense realism. It abandons what is usually taken to be the empirical basis of any physical theory, namely the existence of macroscopic, observable phenomena localized in space and time. Consequently, there is no need for quantum mechanics to have an empirical content. Quite to the contrary, quantum mechanics shows that what we take to be the empirical content of a physical theory is an illusion. Physics does not have the task of explaining observable macroscopic phenomena, since there are no such phenomena. Nonetheless, one then has to work out an account of why the world appears to us as if there were these observable macroscopic phenomena, consisting in objects being located in three-dimensional space and having definite properties, such as cats being either alive or dead, pointers pointing either upwards or downwards, etc.

Formulating quantum theory exclusively in terms of (1.A) and (1.B) goes back to Everett (1957). The most widespread idea in the contemporary literature on Everettian quantum mechanics is to establish a link between the decoherence of the universal wave-function in configuration space and the appearance of macroscopic objects in definite locations with definite properties to observers (see, the papers in Saunders et al. 2010 for the contemporary discussion as well the recent book by Wallace 2012). In order to establish that link, it is assumed that there are infinitely many branches of the universe as well as infinitely many copies of each observer ("many worlds", "multiverse") such that any particular possible value of localization of a physical object is correlated with a particular value for a conscious state of the observer, namely that definite localization appearing to the observer.

Note that decoherence can at most account for the *appearance* of macroscopic objects in definite locations with definite properties to observers and can do so if—and only if—one adopts the ontology of a universal wave-function existing in a high-dimensional space and decohering in that space. There is no question of the notion of decoherence allowing for a solution to the measurement problem that retains (1.A), (1.B) and (1.C) in the quotation above—that is, that allows to acknowledge the *existence* of macroscopic objects localized in three-dimensional space without

either adding something to the standard formalism of quantum mechanics (not 1.A) or changing the Schrödinger dynamics (not 1.B).

Although decoherence does not lead to less but to more entanglement, the quantum system becoming entangled with all the systems in its environment, it is sometimes claimed in the literature that due to the enormous number of degrees of freedom of the environment, a local observer does not have access to the entanglement; consequently, the world appears to him/her as if there were dynamical properties with determinate values (see, e.g. Kiefer 2012). However, there is no justification for such a claim (see, e.g. Adler 2003): First of all, there is no justification for introducing the notion of a *local* observer, since as long as one considers only the wave-function and decoherence, there is nothing in the theory that allows one to postulate systems that have a determinate position in physical space. Even if one admitted such a stipulation, the state of any local observer would rapidly become entangled with the state of the quantum system and the environment—it would simply be part and parcel of the overall entangled state. Consequently, there would not be any dynamical properties of the observer that could have a determinate value; in particular, he/she would have neither a determinate position nor any determinate value of consciousness properties such as a measuring device appearing to him/her as being in a state in which it indicates spin up (and not down) or spin down (and not up). In short, the vanishing of the interference terms in the wave-function (or the density matrix) known as decoherence by no means warrants the claim of there being local observers in consciousness states of determinate numerical values appearing to them.

It is only if one considers decoherence in the framework of the Everett interpretation, namely in the framework that is committed in the first place to the existence of a universal wave-function in a high-dimensional space, that one can then employ the notion of the decoherence of that wave-function in order to account for the *appearance* of macroscopic objects in definite locations with definite properties to the consciousness of observers. However, rejecting common sense realism on the basis of quantum mechanics is a high metaphysical price to pay. To my mind, such a rejection would be justified if and only if there were no ontology of quantum mechanics available that acknowledges the existence of macroscopic objects localized in three-dimensional space (see also, Monton 2006). But there are proposals in this sense—that is proposals that retain (1.C) in the above-quoted formulation of the measurement problem. Let us therefore now examine these proposals.

20.4 Bohm's Quantum Mechanics

If upon consideration of the consequences of the many-worlds interpretation of quantum mechanics as a view of physical reality one rejects this interpretation, then one has to come to terms with Bell's dictum that "Either the wavefunction, as given by the Schrödinger equation is not everything, or it is not right" (Bell 1987, p. 201). Bearing in mind the fact that the wave-function is a mathematical object

and that as such it does not tell us what in the physical world it represents, one may be tempted to give up claim (1.A) and maintain that the wave-function "is not everything": It does not tell the whole story about what there is in the physical world. Since more than six decades now, we have had a precisely formulated theory at our disposal that elaborates on this idea, namely Bohm's quantum mechanics known as Bohmian mechanics (see, Bohm 1952; Bohm and Hiley 1993; and the papers in Dürr et al. 2013 for the contemporary elaboration of the theory). Bohm's theory starts from the trivial fact that macroscopic systems such as measuring devices cannot have a determinate position in physical space unless the microscopic systems that compose them also have a rather determinate position. If one adopts common sense realism, macroscopic systems are localized in physical space even if no one observes them. Hence, the microscopic systems that compose macroscopic systems are also localized in physical space independently of whether or not anyone makes a measurement.

Starting from these trivialities, Bohm's theory then adds the—controversial—claim that these microscopic systems cannot acquire a rather determinate position in space and time unless they *always* have one. Hence, Bohmian mechanics introduces a determinate value of position for *any* physical system as an additional variable that is not specified by the wave-function. More precisely, the ontology of Bohm's theory consists in particles that always have a definite position and hence a definite trajectory in space–time. The wave-function in configuration space does not contain the information about the position of the particles. It plays a role that is analogous to the one of force fields in classical mechanics: It determines the form in which the particles move in physical space in time (with the difference that Bohmian mechanics is a first-order theory, the wave-function determining the value of the velocity of the particles, whereas classical mechanics is a second-order theory, the force fields determining the acceleration of the particles). The wave-function is therefore often associated with a field or a wave ("pilot wave") that guides the motion of the particles. But this association cannot be taken literally: The wave-function is not—and does not represent—a field in four-dimensional space–time, since it does not permit to assign values to space–time points.

Nonetheless, the following analogy with classical fields is possible: In classical mechanics, one can conceive properties such as mass and charge as dispositional properties that fix the form of the motion of the particles (by fixing their acceleration). One can then take the attitude of regarding the formalism of classical field theory as expressing how these dispositional properties of the particles perform that function, without subscribing to the ontological commitment of fields existing as concrete objects in physical space over and above the particles (see, Lange 2002 for a good introduction to the discussion about whether or not one should subscribe to an ontological commitment to classical fields). Thus, the field value assigned to a given space-point does not represent a physical property existing at that point, but expresses only the information about what would happen to the motion of a particle if a particle were present at that point. By the same token, one can say that the wave-function in Bohmian mechanics represents a dispositional property of the particles that fixes the form of their motion, as do mass and charge in classical mechanics.

If one takes fields to be nothing more than the mathematical representation of such dispositional properties of the particles, the fact that the quantum mechanical wave-function can only be conceived as a field on configuration space poses no problem.

By contrast to mass and charge, a dispositional property in Bohmian mechanics that fixes the form of the motion of the particles cannot be an intrinsic property of each particle; it can only be a holistic property of all the particles taken together (see, Belot 2012, pp. 77–80, Esfeld et al. (2013)). Bohmian mechanics satisfies Bell's condition of non-locality for any theory that is to make correct predictions about quantum mechanical experiments by conceiving the velocity of any particle at a time t as depending on the position of *all* the other particles at t. The issue then is whether the implementation of quantum non-locality in Bohm's theory is distinct from Newtonian action at a distance. In Bohm's theory, there is no direct interaction among the particles. One can say that in virtue of possessing the mentioned holistic property, the motion of any particle is correlated with, strictly speaking, the motion of all the other particles.

Albert (1992, p. 134) remarks about Bohm's theory, "The metaphysics of this theory is the same as the metaphysics of classical mechanics". None of the metaphysical consequences that are often invoked as following from quantum mechanics hold in Bohm's theory: There are particles as in classical mechanics moving on definite trajectories in space–time, with these trajectories being determined by a deterministic law. As in classical mechanics, the role of the mathematical structure of the formalism of quantum mechanics and the Bohmian guidance equation is to determine a *law* of the temporal development of the objects about which the theory talks, namely the particle positions. Probabilities enter into Bohmian mechanics in the same way as in classical statistical mechanics: They are due to ignorance of the exact initial conditions, that is, the exact initial particle positions. More precisely, making a certain equilibrium assumption about the initial distribution of the particle positions in the universe yields the quantum mechanical probability calculus, and does so for all future times (see, Dürr et al. 2013, Chap. 2). In Bohmian quantum field theory, the continuity in ontology is maintained, but there is a further change in the formalism: The Bohmian law of the temporal evolution of the particles is amended to make room for stochastic events of particle creation and annihilation. A theory is thus envisaged in which the empirical predictions of textbook quantum field theory are grounded in an ontology of particles (see, Bell 1987, Chap. 19; Dürr et al. 2012, Chap. 10).

Bohm's theory has long been ostracized, but during the course of a serious evaluation of proposals for an ontology of quantum mechanics since the 1980s, it has come to be acknowledged as being an important contender for an ontology of quantum mechanics (compare, e.g. Putnam 1965 with Putnam 2005 as evidence for this change of attitude). The reason is that it is difficult to see what could be a knock-down objection to Bohm's quantum mechanics. The main remaining concern is that a Bohmian quantum theory cannot be formulated in a Lorentz-invariant manner. It has to presuppose a global temporal order of all events in the universe. Bohmian mechanics implies that if a local observer had complete knowledge about the particle trajectories in the space–time region where he/she is situated, he/she could infer

from that local knowledge what is going on at space-like distances *at the same time* (see, Maudlin 2007, pp. 3167–3168; Maudlin 2008, pp. 161–170; but since a local observer cannot know the exact positions of the particles, it is also in Bohmian mechanics excluded that one could exploit the non-locality of quantum physics for a transmission of information between space-like separated events).

It is, however, not clear whether one can build a valid objection to Bohm's theory on the failure of Lorentz invariance. As mentioned above, Bell's theorem proves that quantum theory regards events that are space-like separated from a given point in space–time as contributing to determining what there is at that point. The question can therefore only be whether despite this fact of quantum non-locality, it is possible to set out a Lorentz-invariant interpretation of quantum mechanics. One may object to this assessment that there is a relativistic quantum theory, namely quantum field theory. But of course also in quantum field theory, the probabilities for measurement outcomes at a certain space–time point or region depend on what there is at points or regions that are separated by a space-like interval from that point. As regards the demand for a Lorentz-invariant account of these correlations, quantum field theory is not in a better position than non-relativistic quantum mechanics. In sum, the decisive question for the assessment of Bohm's quantum theory is whether one can do better: Is it possible to elaborate on a complete, precise and credible ontology of what quantum mechanics tells us about the physical world without introducing additional variables and without forgoing Lorentz invariance?

20.5 Turning Textbook Quantum Mechanics into an Interpretation of Quantum Mechanics

In university courses and in standard textbooks from von Neumann (1932) onwards, quantum mechanics is presented in the form of a combination of two radically different dynamics: When no measurement is made, one uses a linear dynamical equation such as the Schrödinger equation in order to calculate the temporal development of the wave-function of a quantum system. However, when a measurement is made, the wave-function is supposed to collapse so that it represents the system as having one determinate value of the measured property at the exclusion of all the other ones—such as the spin of an electron having the value spin up (and not spin down; or vice versa)—or, more general, the quantum system having a determinate position in physical space. But the textbooks remain silent on what this sudden change of the wave-function is supposed to represent—a real physical change occurring in the world, or merely a change in our knowledge. If one settles for the latter option, one is committed to rejecting (1.A) and accepting additional variables, Bohm's theory being the only precise one in that sense, since one then presupposes that the quantum system had a determinate position already before the measurement and that all what the measurement does is to reveal that position (change in our knowledge); if one spells this consequence out precisely, it then turns out that there is no need to reject (1.B) as well. If, by contrast, one takes this ambiguity in textbook quantum

mechanics to be a reason to reject the idea of a wave-function collapse altogether and holds on to the textbook presupposition that the wave-function is a complete description of the properties of quantum systems, then one is committed to rejecting (1.C)—one then simply does not have the means to allow for measurements having outcomes and has to settle for an ontology along the lines of the many-worlds interpretation.

But let us take textbook quantum mechanics literally, thus rejecting principle (1.B) above: The wave-function completely describes the properties of physical systems, but under some circumstances—measurements being a case in point—quantum systems change in such a way that they acquire a determinate value of position, that change being represented by the collapse of the wave-function. Is it possible to make this idea precise so that one specifies when (under what circumstances) and how this change happens? Doing so requires amending the Schrödinger equation. The only precise physical proposal in that sense goes back to Ghirardi et al. (1986) (Gisin 1984 is a forerunner). GRW add a stochastic term to the Schrödinger equation such that, in brief, a single microscopic quantum system has a very low objective probability (propensity) to undergo a spontaneous localization (say once in 10^8 years). However, when one considers a macroscopic system that is composed of a huge number of microscopic quantum systems (say 10^{23}), one of these microscopic systems will undergo a spontaneous localization in less than a split of a second (in 10^{-15} years) so that, due to the entanglement, the whole system will be localized. When one couples a quantum system to a macroscopic system, due to the quantum system thus becoming entangled with the macroscopic system, it will also undergo a spontaneous localization in less than a split of a second. GRW provide a precise dynamics for the transition from quantum systems in superposed and entangled states to these systems acquiring classical properties such as notably a determinate localization so that they can then compose the well-localized macroscopic systems with which we are familiar (and some of which are capable of amplifying the properties of microscopic systems, being suitable to be used as measurement devices).

GRW quantum mechanics leads to predictions that slightly differ from the ones of the textbooks. It is an open issue whether future experiments will only enable a more precise tuning of the parameters that a GRW-type theory has to add to the Schrödinger equation or whether they will allow for experimental tests that decide between quantum theories that change the linear and deterministic dynamics (not (1.B)) and quantum theories that either regard the wave-function as not yielding the complete information about the quantum domain (not (1.A)) or that reject the existence of measurement outcomes (not (1.C)). In this case, certain metaphysical options that one can build on quantum mechanics would be ruled out by experiment.

For the time being, however, the question is what the wave-function and its development in configuration space according to the GRW equation refer to; in other words, what the ontology of the GRW theory is. Again, taking textbook quantum mechanics literally, we have to say that a quantum system such as an electron, when not having a determinate value of position, is smeared out in space. What the GRW dynamics then achieves in improving on the collapse postulate in the textbooks is to describe how this position distribution smeared out in real physical space develops

such as to be concentrated around a point. This is indeed the reading of the physical significance of the GRW dynamics that Ghirardi himself developed in proposing a mass density ontology (see, Ghirardi et al. 1995; Monton 2004): The mass of, say, an electron when it has not a determinate position is literally smeared out in physical space, creating thus a mass density field. On this view, hence, the world is a structure of objects with smeared-out values of their dynamical properties that are correlated with each other. That structure includes the disposition to develop under certain circumstances into correlated determinate values (see, Dorato and Esfeld 2010 for the dispositionalist reading of GRW).

Like Bohm's theory, the mass density ontology of GRW cannot be spelled out in a Lorentz-invariant manner, since exact knowledge of the mass density distribution would enable a local observer to infer an objective foliation of space–time. The most serious problem of the mass density ontology in contrast to Bohm's theory is that the story of a smeared-out mass density developing into a determinate position cannot be told in a precise manner: The smeared-out mass density can simply not evolve in such a way that it concentrates around a point; it may evolve in such a way that most of it is concentrated around a point in real physical space, but there will always be something left of it that is not located around that point. Consider what this means for the measurement of the spin of an electron in which the results spin up and spin down are equiprobable: The GRW amendment of the Schrödinger dynamics achieves that at the end of the measurement, the spin of the electron will be concentrated around one of these values, say spin up, but the value spin down will also always be there, albeit only in a tiny concentration so to speak. Accordingly, the mass density making up the measuring device will mostly be in the shape of the measuring device indicating spin up, but there also is a tiny mass density in the shape of the measuring device indicating spin down. This problem cannot be solved by simply talking in terms of vagueness if we take the wave-function and its development according to the GRW dynamics literally as the complete description of what happens with the spin of an electron: The tiny spin-down part of the wave-function of the electron then represents a feature of reality in the same way as the large spin-up part (see, Wallace 2008, Sects. 2.5.2–2.5.4 for a presentation of the state of the art, and Maudlin 2010, 134–139, for an assessment).

However, there is another reading of the GRW dynamics available that entirely drops the idea of there being smeared-out values in the physical world. That reading is due to Bell (1987, p. 205). A good way to access it is via a comparison with Bohmian mechanics: In Bohm's theory, quantum systems *always* have a determinate position, and the determinate value of position is not taken into account in the wave-function description. According to what is known as the GRW flash theory (this term goes back to Tumulka 2006), quantum systems have a determinate value of position *only* when the wave-function as developing according to the GRW modification of the Schrödinger dynamics indicates such a value, that is, when a spontaneous localization occurs and these sparse determinate positions are *all* there is in the world. To put it differently, the spontaneous localizations that GRW postulate are conceived as flashes (events) centred around space–time points, and these flashes (events) are all there is in space–time. Starting with an initial distribution

of flashes, the wave-function enables one to calculate the probabilities for the occurrence of further flashes. On this view, the collapse of the wave-function is a misleading description of the fact that new flashes occur and that, consequently, the information available for the calculation of the probabilities for the occurrences of future flashes has to be updated (see, Allori et al. 2008 for an illuminating comparison of the ontologies of Bohm, GRW mass density and GRW flashes).

Nonetheless, the GRW flash theory is a realist interpretation of quantum mechanics that proposes a complete ontology: Inherent to each flash is a propensity to produce a further flash—if we consider only one flash taken in isolation, that propensity is so weak that an isolated flash will produce another flash only every 10^8 years. That production thus occurs across a huge gap in space–time. However, in any scenario that is to apply to the real world, we have to start with a large initial distribution of flashes, and to that distribution as a whole inheres the propensity to produce large numbers of further flashes. In other words, we have a structure of correlated flashes that has the propensity or disposition to produce further correlated flashes. That structure is non-local in the sense that in calculating the probabilities for further flashes, one has to take flashes that are separated by space-like intervals into account. Ontologically speaking, this means that the propensity of a given distribution of flashes to produce further flashes extends over space-like separated intervals.

The GRW flash ontology is sparse, but it does the job of accounting for macroscopic objects whose properties have determinate values (and some of which can be used as measuring devices): Macroscopic objects are, as Bell put it, galaxies of flashes (Bell 1987, p. 205). Maudlin (2011, pp. 257–258) raises as the main objection against the flash ontology that it implies the radical falsity of our standard conception of small classical objects such as DNA strands. However, it seems that this objection can be countered: GRW flashes are events at space–time points. The unification of space and time in relativity physics is widely taken to be a good argument for adopting an event ontology, known as four-dimensionalism, and for conceiving macroscopic objects as sequences of events that fulfil certain similarity criteria (see, e.g. Balashov 2010). What the flash ontology abandons is the idea of these sequences being continuous—there is empty space–time between the events on the flash ontology. But there are enough flashes to constitute sequences of events that make up small classical objects such as DNA strands.

However, there is another, much more serious problem for the flash ontology. Consider the question of what a measuring device interacts with when it is supposed to measure a quantum system such as an electron. On the flash ontology, there is nothing with which the measuring device interacts—there is no particle that enters it, and no wave or field or mass distribution that touches it either. There is only a flash in its past light-cone. That flash has the propensity to produce a further flash, and that propensity is supposed to be triggered by the measuring device, but that propensity is not a wave or a field that stretches out in space–time so that there is some physical entity or other with which the measuring device could interact. The quantum system that is to be measured is supposed to be coupled with the huge configuration of quantum systems that make up the measuring device, thereby to

become entangled with that huge configuration, and that entanglement lasts only for a tiny split of a second, since there immediately occurs a GRW hit in that huge configuration. However, this story does not make sense on the flash ontology, since there is nothing with which the measuring device could interact or which could be coupled to it (unless one were to stipulate that it directly and retroactively interacts with the flash in its past light-cone).

By contrast to Bohm's theory and the GRW mass ontology, on the GRW flash theory, complete knowledge of local occurrences of flashes never makes inferences about what there is at space-like distances possible. The reason is that there is no trajectory and no continuous distribution of anything in physical space whose local temporal development could reveal information about what is going on at space-like distances. There are only flashes occurring occasionally at space–time points. Against this background, Tumulka (2006, 2009) has shown that the distribution of flashes in space–time is compatible with Lorentz invariance. However, a realist interpretation of quantum mechanics has to recognize physical relations existing among the flashes over and above their mere occurrence at space–time points, namely relations of entanglement connecting certain flashes. Acknowledging such relations, it is by no means clear whether one can develop a Lorentz-invariant GRW flash ontology, since these relations connect in any case space-like separated flashes. It rather seems that there has to be an objective temporal order among these flashes—otherwise, there would be no fact of the matter which flashes in nature are connected by relations of entanglement such that these relations determine the objective probabilities for the occurrence of further flashes. By way of consequence, as things stand, it would be exaggerated to claim that the GRW flash theory provides for a realist interpretation of quantum mechanics in terms of a physical reality in four-dimensional space–time that is Lorentz invariant.

20.6 Conclusion

If one wants a metaphysics that gives us a fundamental ontology of what there is in the world, one has to take physics into account. Quantum mechanics (or quantum field theory for that matter) is our currently best theory of what there is in the world. But it is not possible to employ the tools of metaphysics—such as logic and conceptual analysis—in order to simply read off an ontology from quantum theory. In setting out to do so, one has to engage with the science itself and settle for a formulation of quantum theory on the basis of employing the conceptual tools of philosophy. All the positions considered in this chapter differ in the formalism of quantum physics that they propose, and they radically differ in their ontological commitments.

One may consider this situation to be one of underdetermination. But this is so only at a superficial glance. The task of philosophy is first to formulate a general ontological framework that can accommodate quantum physics on whatever interpretation (such as the one in terms of a certain sort of holism sketched out in

Sect. 20.2) and then to precisely spell out the different ontological options that go with the different formulations of quantum mechanics (different solutions to the measurement problem) and to lay out their consequences. Once this is done, one can be happy if one is left with a single position that can stand firm.

This conclusion is of course controversial. Nonetheless, to end this chapter, here is my assessment stated in a quick and dirty manner: The mathematical elegancy of working only with the wave-function formalism and the Schrödinger dynamics loses its appeal as soon as one spells out its consequences for an ontology of the *physical* world (by contrast to confining oneself to wave-functions in an abstract mathematical space). Since trying to understand quantum mechanics for the above-mentioned reasons that doing metaphysics requires engaging with science, I have hoped that it is possible to turn textbook quantum mechanics into a credible interpretation by integrating the collapse postulate into an amended Schrödinger dynamics. But doing so on the basis of taking the idea of smeared-out quantum systems literally whose state collapses into rather precise positions under certain conditions (the GRW mass density theory) runs into serious problems, as does Bell's GRW flash ontology. My tentative conclusion now therefore is that given the state of the art, Bohm's theory still stands out as the best candidate for an ontological interpretation of quantum theory.

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Part II
History of Philosophy

Chapter 21
Bolzano's Lehrjahre

Jan Sebestik

Abstract Bernard Bolzano (1781–1848) was born in Prague into a Catholic family (his father was Italian) with cultural interests. His early years were spent under the auspices of the reforms of the Austrian emperor Joseph II, which resulted in the modernisation of the society and awakening of sciences. Bolzano spent his most important formative years in the class of philosophy, where he became interested in mathematics and philosophy. His mathematical notebooks show his extensive knowledge of the literature of the seventeenth and eighteenth centuries and contain entries about current mathematical problems as well as reflections about methodology and critique of some fundamental concepts. In 1800, he decided to study theology, but at the same time he prepared his first publication on the Euclidean postulate of parallels (published in 1804). Having finished his studies, he participated in the contest for the chair of "science of religion", newly founded by Emperor Franz to fight atheism and the ideals of the French revolution, and another for the chair of mathematics. He won both and the commission appointed him for the "science of religion". Bolzano did not perceive the larger political context and thought that this chair could be a forum for spreading his own ideas of the reform of the society. At the end of 1819, the contradiction between the intentions of the emperor and Bolzano's own representation of an ideal society led to the dismissal of Bolzano from the University of Prague.

Keywords Science in nineteenth century Bohemia · Education in nineteenth century Bohemia · First mathematical definitions · Catholic religion and priesthood · Proof

The year 1781, when Bernard Bolzano was born, was crucial for the Habsburg Monarchy as well as for philosophy, and the two main events that took place influenced both his life and his thinking. In 1781, Joseph II started his fundamental reforms of the Austrian feudal regime and the same year Kant published his *Critique of Pure Reason.*

For Kevin Mulligan

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The reforms of Joseph II whose main expression was the "patent of tolerance" introduced religious freedom suppressed since 1620, suppressed serfdom and the feudal privileges of the nobles and for some time also censorship, forbade torture and reformed justice, opening the space for free expression of thought and learning.

Science, so long neglected, began to flourish. Already in 1770, the geologist Ignaz Born and Count F. J. Kinsky founded the first learned society in the Habsburg Empire, later called the Royal Society of Sciences of Bohemia (the Academy of Science of Vienna was created only in 1847). The most important scientists of Bohemia became its members: the technologist Franz Joseph von Gerstner, the founder of the Bohemian Polytechnics; the "patriarch of Slavic studies" Josef Dobrovský; the physician Jiří Procházka, one of the discoverers of the theory of reflex; the physiologist Jan E. Purkyně, known for his studies on cell theory, perception and dreams; the historian František Palacký, author of the monumental *History of the Czech nation*; the physicist Christian Doppler, who specialised in wave theory; and, of course, Bernard Bolzano.

Bolzano was born in an Italian–German merchant family: His father came from the region of the Como Lake in Italy, but lived in Bohemia from early youth and worked as a businessman. His mother was a daughter of a German–Prague merchant. There could not be a sharper contrast between the two parents: on the one hand, an austere and calculative father, 16 years older than his wife; on the other hand, an emotional mother educated in a nunnery and living exclusively for her children.[1] Both parents were devoted Catholics. Bolzano lived his boyhood with his almost always pregnant mother surrounded by small children, 12 altogether, who died one after another. Only Bernard and his elder brother Johann survived till full age. Almost all his life, Bolzano was sick; in his adolescent years, he began to suffer tuberculosis which accompanied him all his life. The deaths of his sister, mother and his benefactress Anna Hoffmann put him in a state close to death for long months.

In spite of the suffocating family atmosphere, on Sundays books were read at home: mainly the Bible, different religious books, sermons, Hermes' *Handbuch der Religion* and *Opere drammatiche* of Metastasio, the works of Gellert, Gessner, Iffland, Engel, and others. Besides, Bolzano read Torquato Tasso, Klopstock, Schiller, and also classical Greek and Latin authors. In the family circle, he learned to love books and this love never abandoned him.

He was born at 224 Platnerska, which is today part of the Municipal Library and located opposite Clementinum, the present National Library, in his time the Charles–Ferdinand University; the family moved to 25 Celetna when he was 5 years old. Because of his fragile health, he began his instruction with private teachers at home and it was only at the age of 8 that he went to the German *Hauptschule* at the Tyn Church at the Old City Square, a 100 m from his home at Celetna. At the age of 10, he attended the Piarist Gymnasium at Prikop where he studied for 5 years.

[1] "Not only did she prefer to live in the circle of her children, but here only, she felt at her best, and when separated from her dearest, she could not stay even for an hour calm" (Lebensbeschreibung, 7).

He might have been among the first best eight or nine pupils, but his achievement fell short of his master's recognition. Things changed when he entered university.

In 1796, he joined the 3-year class of philosophy which was conducted in the building of the university. "A new world opened before me when I entered the Philosophy classes" (*Ibid*., 18). Nevertheless, "in the first weeks, I paid no attention to the subject that captivated me most later, namely to mathematics, because I was offended by a somewhat rude behaviour of the at that time professor of this science Vydra, in other respects full of merit". It is a paradox that he also had difficulties to understand philosophy, especially logic, all disciplines in which he later made decisive discoveries.

It was not in the lectures of his professors that Bolzano found some replies to his questions concerning the fundamental concepts of mathematics, but rather in the works of a second-rate mathematician, Abraham Kästner. In fact, the most important mathematicians of the eighteenth century were not genuinely interested in the foundations of mathematics. But Bolzano very early felt the necessity to reform, redefine mathematical concepts considered by everybody as sufficiently clear and engaged mathematics in the examination of its first concepts and methods. "My preference for mathematics was properly directed towards its purely *speculative* part, in other words, in mathematics, I appreciated only what is at the same time *philosophy*" (*Ibid.*, 72). He found such treatment of his subject in the well-known *Anfangsgründe der Arithmetik, Geometrie, ebenen und sphärischen trigonometrie und Perspektiv* of Kästner (5th ed. 1792):

> When I opened by chance a page in Kästner's *Treatise*, the small stars which indicate a note excited my curiosity and I decided immediately to study mathematics, hoping to find in this science what I have sought in vain since a long time. (*Ibid.,* 19)

He began to read the great authors of his time, and his extensive reading list contained the names of Kant, Euler, D'Alembert, Carnot, Johann Schultze, Wallis, du Bouguet, Klügel, Legendre, Newton, Lagrange, Laplace, Barrow, Clairault, Boscovitch, Segner, later also Lacroix, Wronski, Gauss and Cauchy, with many annotations and comments. The long series of his mathematical notebooks, first called *Adversaria mathematica* and later *Miscellanea mathematica,* yields an invaluable source for the study of history of mathematics in the eighteenth and the first half of the nineteenth centuries. The first notebooks contain many explanations of concepts and tentative solutions of mathematical and physical problems with long calculations, e.g. on balance, friction, obstacles of movement, trigonometric functions, spherical triangles, fluids and solids, infinitesimal calculus, pressure of a roof on the walls of a building, movement of a hammer, comparison of spheric trigonometry with plain trigonometry, conic sections, parallelogram of forces (in his later years, he wrote an article about it) and first concepts of mechanics, movement, force, etc. In 1803, he presented a definition of the continuum that can be found in later works and even in the *Paradoxes of the Infinite*. I agree with Bob van Rootselaar that it was a current definition in the contemporary literature.

The notebooks contain many excerpts of mathematical literature, e.g. Wolff's *Elementa matheseos universae*. An exceptionally long document is the summary of

Lagrange's *Théorie des fonctions analytiques*: carefully written 64 pages of one of the milestones of mathematical literature which had just appeared in 1797. A note concerning Descartes' *Dissertatio de methodo:* "About the advice: *to doubt about everything* should merit a proper treatment in logic". The young student planned already a dissertation about the doctrine of the mathematical magnitude.

In 1799, Bolzano finished the 3-year philosophy class with distinction. He hesitated about the choice of profession, thinking about becoming a priest. His parents tried dissuading him by showing strong disagreements at the obligation of celibacy. They all agreed on the following compromise: Due to excellent results of final examinations, Bolzano got a grant and took a free year to deepen his knowledge of mathematics and to think more about his future. At the end of the academic year, he was to take a decision. He took advantage of his freedom to accomplish in 1 year the 2-year course on higher mathematics by Gerstner, studying at the same time physics, chemistry and philosophy. He also spent many hours writing about the choice of a profession. At the end of the academic year, he decided to study theology.

He changed faculties and began to study at the Faculty of Theology, without taking the final decision of becoming priest. For a long time, he continued to have doubts about the validity of religious doctrines and eventually only an incidental remark of Mika, teacher of pastoral theology, convinced him about the justification of the Catholic religion: "A doctrine is justified if it is possible to show that our belief in it provides certain moral benefits". Bolzano comments: "Suddenly, it became indubitable for me that in matters of religion, namely concerning the divine revelation, there is no question about how the things are in themselves, but on the contrary, which representation of them is the most edifying" (*Lebensbeschreibung*, 27). Thus, the goal of the Catholic religion is fundamentally to make us morally better and to merit eternal happiness after our death. This attitude helped him to consider the dogmas as less important and to interpret different religious doctrines in a metaphorical or symbolic sense.

The *Adversaria mathematica 1* (1799?–1803) not only begins with considerations about physics, about the definition of a straight line, about the infinite, absolute and relative in geometry, but also contains a note about suicide and about freedom versus divine predictions. A note answers a question treated later in Bolzano's *Contributions to a better founded presentation of mathematics,* in the *Theory of science* and elsewhere:

> Has a proposition multiple proofs?
> If one understands by the proof of a proposition not the manner how this proof is conducted in language, but the grounds on which it is founded, I think that a proposition cannot be founded on different grounds from which it could be derived. One often believes to have yielded two proofs, but when one analyses the propositions used in both proofs, one finds that eventually they can be reduced to the same principles (*Grundsätze*). One has only put in different order and differently separated the different principles that compose the proposition to be proven. In this way, the elements of the proof only have different names, but the whole proof contains the same fundamental parts (*dieselben Grundtheile*). (*Adv. math. 1,* manuscript, Österreichische Nationalbibliothek, n° 3451, 9)

He reflects on fundamental concepts of mathematics, above all on that of magnitude, and all the time, he tries to improve them. In 1802, Bolzano believed that only Kantian philosophy could define it: "The definition of magnitude does not belong to

mathematics; mathematics cannot achieve it. The definition of this concept belongs to the transcendental philosophy" (*ibid*., 45). Trying to explain it as that what can be diminished or augmented is no definition because these concepts already presuppose that of magnitude.

Here, we also find the exhaustive critique of the defects of the mathematical concept which will be integrated in the *Contributions* and in other writings:

> The first definitions in Arithmetics, Geometry and in other mathematical disciplines are not logically correct. In arithmetics, we lack a correct definition of positive and negative magnitude, of irrational magnitude, of imaginary magnitude (Nota bene: the irrational magnitudes are in a way also imaginary and the imaginary magnitudes could be generally reduced to such that are at the same time > and < a), of power, of zero, of $1/\infty$ and ∞. In geometry, we lack the definitions of length, surface, line, point, and the theory of parallels. (*ibid*., 219)

His notebooks contain many entries on the last problem. Since 1802, Bolzano worked on the proof of Euclid's postulate of parallels. He knew already that such a proof could be constructed from the principle of similitude. This is what he did in his first published work, *Considerations of some objects of elementary geometry* (1804).

> Methodology: "[…] all propositions in mathematics (and only there) must be proven with complete rigor, and thus: one does not establish a concept without showing its possibility. One does not form a judgement without proving its necessity from previous concepts or from undoubted intuitions." (*IV. Adv. math. 2,* Allerlei matematische Gedanken, 8r-9v)

In 1804, Bolzano finished his study of theology. He always thought about reforming society and during his studies, he wanted to become a teacher of religion rather than a priest. But a new event changed his mind: the establishment of a new chair of the "science of religion", ordered by Emperor Franz. After the death of Joseph II, many of his reforms were revoked and the spirit of Enlightenment almost vanished, replaced by the Catholic Restoration. For the emperor, the creation of the new chair should help to educate obedient citizens of the state and to eradicate the ideas of the French *Lumières* and the ideals of the French revolution. Bolzano did not perceive this larger political context and thought that this chair could be a forum for spreading his own ideas on the reform of the society. The dismissal of Bolzano from his chair at the end of 1819 put an end to the contradiction between the goals determined by the imperial decree and Bolzano's own representation of an ideal society. Bolzano was silenced. But in 1804, he won the contest at the same time as the contest for the chair of mathematics; in spite of the proposition of Gerstner to win Bolzano for mathematics, the final decision of the commission nominated him for the chair of science of religion. One can only speculate what would have been the history of mathematics if he had become professor of this science in Prague and had founded a school. Instead of this, in haste, Bolzano accomplished two necessary steps for his nomination: On April 5, he graduated as doctor of philosophy and 2 days later, he was ordained priest. On April 19, he was introduced into his office at the University. In any case, in spite of the disfavour of fate or rather because of it, he offered to humanity one of the most precious gifts: his *Theory of science.*

Chapter 22
Bolzano Versus Kant: Mathematics as a Scientia Universalis

Paola Cantù

Abstract The chapter will discuss some changes in Bolzano's definition of mathematics attested in several quotations from the *Beyträge, Wissenschaftslehre* and *Größenlehre*: Is mathematics a theory of forms or a theory of quantities? Several issues that are maintained throughout Bolzano's works will be distinguished from others that were accepted in the *Beyträge* and abandoned in the *Größenlehre*. Changes will be interpreted not only as a consequence of the new logical theory of truth introduced in the *Wissenschaftslehre* but also as a consequence of the overcome of Kant's terminology, and of the radicalization of Bolzano's anti-Kantianism. It will be argued that Bolzano's evolution can be understood as a coherent move, if one compares the criticism on the notion of quantity expressed in the *Beyträge* with a different and larger notion of quantity that Bolzano developed already in 1816. This discussion is based on the discovery that two unknown texts mentioned by Bolzano can be identified with works by von Spaun and Vieth. Bolzano's evolution will be interpreted as a radicalization of the criticism of the Kantian definition of mathematics and as an effect of Bolzano's unaltered interest in the Leibnizian notion of *mathesis universalis*. As a conclusion, it will be argued that Bolzano never abandoned his original idea of considering mathematics as a *scientia universalis*, i.e. as the science of quantities in general, and it will be suggested that the question of ideal elements in mathematics, which has been interpreted as a main reason for the development of a new logical theory, can also be considered as a main reason for developing a different definition of quantity.

Keywords Bolzano · Kant · Mathematics · Mathesis universalis · Quantity

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22.1 Introduction

It is well known that Bolzano, after having criticized in the *Beyträge* the traditional definition of mathematics as a theory of quantities,[1] and suggested an alternative characterization as a theory of forms, went back to the traditional definition in the *Größenlehre*. This chapter aims at understanding why Bolzano changed his mind, and what effect this change had on his conception of mathematics.

Firstly, I will claim that Bolzano's return to the definition of mathematics as a science of quantities was not a U-turn (§ 22.2), because there are several essential issues that were maintained throughout all his writings. Bolzano was always convinced that mathematics cannot be restricted to the study of numbers and magnitudes (§ 2.1), because he never abandoned the idea that the definition of mathematics should not be based on a domain of objects: he always preferred other definitional criteria, such as a sharp distinction with respect to other forms of knowledge (philosophy, logic, other scientific disciplines), or methodological considerations. Bolzano did not renounce to the idea that mathematics is a truly conceptual science (§ 2.2) nor did he change his mind concerning the fact that mathematical treatises include both analytic and synthetic propositions (§ 2.3).

Secondly, I will present some relevant changes that might support the claim that Bolzano's notion of mathematics did nonetheless undergo a significant evolution from 1810 to 1848, as already evident in the fact that he switched from the definition of mathematics as a theory of forms (*Formenlehre*) to a definition of mathematics as a theory of quantities (*Größenlehre*; § 3.1). The development of the theory of ideas in themselves induced him to abandon the belief that mathematics should concern the conditions for the possibility of existence, because he remarked that mathematics could also concern ideas in themselves, which are not and cannot become actual (§ 3.3). In the *Größenlehre*, Bolzano considered any definition that could introduce a sharp distinction between mathematics and other sciences as unattainable (§ 3.2). Besides, he gave a different evaluation of the role of analytic propositions in the *Beyträge* and in the *Wissenschaftslehre*, which might be partly explained as a result of a change in the understanding of the notion of analyticity (§ 3.4). As a result, Bolzano became even more anti-Kantian than before (§ 3.5).

Thirdly, the apparent contradiction between the definitions suggested in the *Beyträge* and in the *Größenlehre* will be explained on the basis of an enlargement of the notion of quantity (Größe)[2] that Bolzano already suggested in 1816 (§ 4). The

[1] For a discussion of the origin and development of the so-called traditional definition of mathematics, see Cantù (2003b, Chap. 3).

[2] In the following, I will use the term "quantity" to translate "Größe", which corresponds to the Euclidean term "mégethos". "Quantity" is thus distinguished from "size" that corresponds to "pelikotés" (see, e.g. Klein 1934–36, p. 173). I preferred "quantity" to "magnitude", because the latter has acquired a very specific meaning in contemporary English, but also because Bolzano himself translates "Größe" with the Latin term "quantitas", as in Wolff, rather than with the term "magnitudo" that was used in some Latin editions of Euclid's *Elements*. For a detailed analysis of the history of the terms, see Cantù (2003b, pp. 80–86).

analysis will be based on the discovery that two unknown texts mentioned by Bolzano can be identified with works by von Spaun and Vieth.

Finally, I will suggest two reasons why Bolzano altered certain features of his conception of mathematics and not others: his mathematical anti-Kantianism and the new logical theory developed in the *Wissenschaftslehre*. The changes mentioned in § 3 will be explained not only as a side effect of the theory of ideas in themselves but also as a further move against Kant. The continuity elements discussed in § 2 will be considered as reasons for defending the coherence of Bolzano's evolution, and will be interpreted as aspects of his unaltered understanding of mathematics as a *scientia universalis*.

22.2 Continuity: Four Never-Abandoned Features of Mathematics

22.2.1 Mathematical Objects Are Not Just Quantities

In the first chapter of the *Beyträge*, Bolzano contrasted Euclid's lack of a definition of mathematics, and the traditional definition that can be found in contemporary textbooks:

> It is well known that the oldest mathematical textbook, Euclid's *Elements*—which in some ways is still unsurpassed—*contains no definition* of the science with which it is concerned. Whether its immortal author did this out of a kind of wilfulness, or because he thought it was not worthwhile, or because he did not know any valid definition to give us, I shall not venture to decide. By contrast, in all *modern* textbooks of mathematics this definition is put forward: "mathematics is *the science of quantity*". Kant has already found fault with this definition in his *Kritik der reinen Vernunft* (see the 2nd edition, p. 742) because in it, as he says, "*no essential characteristic* of mathematics is stated, and the *effect* is also mistaken for the *cause*". (cf. *Beyträge* § 1, in Russ 2004, p. 91)

Similar criticism of the traditional definition of mathematics was quite common among German-speaking philosophers: Kant, Hegel and, after him, Grassmann criticized the definition of mathematics as *Größenlehre*. This is partly due to the fact that Wolff, introducing a German terminology for mathematics and philosophy in his *Mathematisches Lexicon*, had translated several distinct notions—*moles*, *volumen*, *quantitas*, *magnitudo*—by the same word: "Größe".[3] Bolzano's rejection of the traditional definition begins by a mention of Kant's earlier critical remarks. This is something more than an argument *ad auctoritatem*. Bolzano agrees with

[3] For a detailed analysis of Wolff's contribution to the unification of the concept of magnitude and quantity in German terminology, see Cantù (2008). The paper suggests that Wolff's terminological confusion, together with the heritage of the Latin translations by Euclid, which had used the two terms magnitudo and quantitas to translate the Greek term "mégethos", might explain why so many German-speaking philosophers and mathematicians questioned the meaning of the term *Größe*: e.g. Euler, Gauss, Kant, Hegel, Bolzano and Grassmann.

Kant's objection: a satisfactory definition of mathematics should not be based on its domain—i.e. quantities. While Kant argues that such a definition is inadequate because it mistakes the effect for the cause and gives an explanation of why mathematics applies to quantities, Bolzano claims on the contrary that the definition is unsatisfactory because the domain of mathematics does not coincide with quantities; besides, the notion of quantity is not univocally determined.

Bolzano's criticism is expressed in § 2 of the *Beyträge*, where he quotes an anonymous work *Versuch das Studium der Mathematik durch Erläuterung einiger Grundbegriffe und durch zweckmässigere Methoden zu erleichtern*, published by Göbhardt in Bamberg und Würzburg, 1805 (see von Spaun 1805). It is presumably a reprint of a book also published anonymously by Göbhardt in 1804, *Versuch einige Begriffe der Mathematik zu erläutern und zu bestimmen*. I suggest that the author, not identified until now, could well be Franz Ritter von Spaun, who, after having worked for several years in the Austrian administration, was condemned for a writing that was considered politically dangerous, and from 1788 onwards, especially during the 10 years he passed in prison, devoted himself to mathematics.[4] The text quoted by Bolzano contains a criticism of negative quantities, and was reviewed in the *Jenaische Allgemeine Literatur-Zeitung* by an anonymous reviewer "B".[5] The author, like Bolzano, argues that the objects of mathematics are neither quantities in the sense of conceivable entities nor quantities in the sense of sensible objects. Bolzano quotes again the book in the *Erste Begriffe der allgemeinen Größenlehre*, where he repeats what he had already declared in the *Beyträge,* that is to say, that not every quantity need be real (i.e. *wirklich*) or perceivable (*wahrnehmbar*), given that even space and time (to which quantities are often applied) are not real, nor can they be perceived.[6] In both occasions Bolzano quotes the author's definition of quantity as something that exists and can be perceived by some sense.

> Naturally everything here depends on what is understood by the word '*quantity*'. The anonymous author of the book *Versuch, das Studium der Mathematik durch Erläuterung einiger Grundbegriffe und durch zweckmässigere Methoden zu erleichtern*. von Spaun 1805 (S. 4), puts forward the following definition of quantity, '*A quantity is something that exists and can be perceived by some sense*.' This definition is always one of two things, either too wide or too narrow, according to whether the author takes the words '*exists*' and '*can be perceived*' in their widest sense when they mean a purely *ideal existence* and a *possibility of*

[4] Von Spaun wrote several other mathematical books, including *Briefe über die ersten Grundsätze der Mechanik* (1807), *Einleitung zur geometrischen Construction aller Probleme der sphärischen Trigonometrie* (1811), *Anleitung zur geradlinigen Trigonometrie* (1818), *Mein mathematisches Instrument* (1825), but was also well known for his radical criticism of Goethe's poetry.

[5] Cf. Anonymous (1807). It would be interesting to verify whether the author could not be Bolzano himself.

[6] "'Alles was ist und durch irgend einen Sinn wahrgenommen werden kann, ist eine Größe.' Ich wäre dagegen der Meinung, daß nicht jede Größe etwas Reales (wenn dieses soviel als etwas Wirkliches bedeuten soll) um so weniger etwas sinnlich Wahrnehmbares seyn müsse; ja ich glaube, daß nicht einmal Zeit und Raum (auf welche der Begriff der Größen doch ganz vornehmlich angewandt wird) etwas Wirkliches und sinnlich Warhnehmbares seyen". *Erste Begriffe der allgemeinen Größenlehre*, in Bolzano (1975, p. 224).

> *being thought*, or in their narrower and proper sense in which they hold only for a *sensible object which actually exists*. In the first case, quantity would be *every conceivable thing without exception* and if we then defined mathematics as the science of quantity we would basically bring all sciences into the domain of this one science. On the other hand, in the second case, *only sensible objects* would be quantities, and the domain of mathematics would obviously then be excessively restricted—because immaterial things, e.g. spirits and spiritual forces, can also become an object of mathematics, and particularly of arithmetic. (cf. Beytrage, section 2 in Russ 2004, p. 91).

A deeper attention to other parts of the work of von Spaun shows that it aimed at solving mathematical controversies, for example, the question of negative quantities, by means of a new definition of the concepts involved. Spaun claims that if quantities are things that can be perceived, one should then be able to perceive and determine distinctions between things, provided one has abstracted from all particularities: two things can then be distinguished either according to their succession (*Reihe*) or to their position (*Lage*). The first is an algebraic approach, the latter a mathematical approach, because mathematics is a species of algebra (calculus): if one makes abstraction from position, then two things are still different according to their succession (cf. von Spaun 1805, pp. 4–5).

Bolzano assumes the general notion of quantity, something that is composed of equal parts, or something that can be determined by means of numbers (cf. *Beyträge*, § 3, in Bolzano 1974, p. 4), and opposes it to a different notion of quantity (called here form), which amounts to something that is given, and that can be distinguished from other given things by means of position and/or succession, as it was suggested in the mentioned work by von Spaun. This means that mathematics cannot be restricted to the study of numerability. So, in some sense, the main reason why Bolzano refuses the traditional definition is because it is not applicable to all kinds of things, as *mathesis generalis* should be, but rather introduces restrictive constraints.

Bolzano argues that the objects of mathematics are not "the *objects to which the concept of quantity is especially applicable*" either, because in that case all sciences, logic included, would have to be considered as mathematical sciences; besides, no consideration of the frequency of application could ever provide a definite distinction between mathematical and nonmathematical sciences.

> The concept of quantity is *applicable* to all objects, even to *objects of thought*. Therefore, if one wanted to consider the mere *applicability of the concept of quantity* to an object, a sufficient reason for counting the theory of that object among the mathematical disciplines, all sciences would in fact have to count as mathematics, e.g. even the science in which the proposition is proved that there are only *four* (or as Platner more correctly states, only two) syllogistic figures; or the science which states that there are *no more and no less than four sets of three* pure simple concepts of the understanding (categories), etc. Therefore, in order to salvage this definition, one would have to take into account the *difference between rarer and more frequent applicability*, i.e. count only those objects to be in mathematics to which the concept of quantity can be applied *often and in many ways*. But anyone can see that this would be an extremely vague, and not at all scientific, determination of the boundaries of the domain of mathematics. We must therefore look for a *better* definition (cf. *Beyträge*, § 4 in Russ 2004, p. 92).

After having shown that several definitions of mathematics based on its domain of objects as quantities are inadequate, Bolzano turns to the analysis of Kant's suggestion, which is based on the opposition between philosophy and mathematics and on the notion of an a priori intuition that grants the possibility of a construction of mathematical concepts.

Bolzano's criticism of Kant will be further discussed in § 3.5, but it must be noted here that the argument given by Bolzano to reject the definition of mathematics as a science of quantities is at the same time an argument against the Kantian definition. Rejecting the traditional definition because the effect is mistaken for the cause, Kant did not question the idea that mathematics concerns only quantities. On the contrary, he intended to give an explanation of the reason why mathematics concerns only quantities: quantities can be represented in space and time. So, the form of mathematical knowledge is the reason why it concerns only quantities.[7]

In the *Beyträge,* on the contrary, Bolzano rejects the definition of mathematics as a science of quantities not only because the notion of quantity is too vaguely defined but also because he believes that, no matter how broad the notion of quantity might be, mathematics would always concern objects that are definitely not quantities. Quantities are in fact considered as magnitudes (extensive or intensive), whose properties can be fully described by numbers. Neither the notion of geometrical point nor the notion of a permutation can thus be included among quantities.

> If we do not wish to move too far away from the use of language (something which we should surely never do even in the sciences without necessity), then we must understand by quantity, a *whole in so far as it consists of several equal parts,* or even more generally, *something which can be determined by numbers* (Beyträge, I, § 3 in Russ 2004, pp. 91–92).[8]

[7] "Die philosophische Erkenntniß ist die Vernunfterkenntniß aus Begriffen, die mathematische aus der Construction der Begriffe. Einen Begriff aber construiren, heißt: die ihm correspondirende Anschauung a priori darstellen" (Kant 1911, Kant, Immanuel: Gesammelte Schriften. Abt. III: Werke. Bd 3: Kritik der reinen Vernunft, p. 469). "Alles, was im Raum und in der Zeit vorgestellt wird, hat extensive Größe" (Kant 1970, *Vorlesungen über die Metaphysik* (Pölitz), Kant, Immanuel: Gesammelte Schriften. Abt. IV: Vorlesungen. Bd 28 (IV/5): Vorlesungen über Metaphysik und Rationaltheologie, Reimer 1970, p. 562). "Die Form der mathematischen Erkenntniß ist die Ursache, daß diese lediglich auf Quanta gehen kann" (Kant, Immanuel: Gesammelte Schriften. Abt. III: Werke. Bd 3: Kritik der reinen Vernunft, p. 470). "Da die Größe den Gegenstand der Mathematik ausmacht, und in Betrachtung derselben nur darauf gesehen wird, wie vielmal etwas gesetzt sei, so leuchtet deutlich in die Augen, daß diese Erkenntniß auf wenigen und sehr klaren Grundlehren der allgemeinen Größenlehre (welches eigentlich die allgemeine Arithmetik ist) beruhen müsse" (Cf. Kant 1912, Kant, Immanuel: Gesammelte Schriften. Abt. I: Werke. Bd 2: Vorkritische Schriften II (1757–1777), p. 282).

[8] Cf. also the following passage: "The concept of quantity, or of number, does not even appear in many problems of the *theory of combinations* (this very important part of general *mathesis*). For example, if the question is raised: *which permutations*—not *how many—of the given things a, b, c, …are admissible?* In the particular parts of mathematics, *chronometry, geometry* etc., as the names suggest, some object *other* than the concept of *quantity* (e.g. time, space, etc.) appears everywhere, and the concept of quantity is just *frequently applied* to it. So that in all these disciplines there are several axioms and theorems which do not even contain the concept of quantity. Thus, for example, in chronometry the proposition that *all moments are similar to each other*, and in geometry that all points are similar to each other, must be established. Such propositions, which do

A similar argumentation is presented in the *Größenlehre* where Bolzano goes back to the traditional definition of mathematics (see § 3.1). How is this possible? Firstly, Bolzano applies a principle that he had already enunciated in the *Beyträge* and that constitutes a leitmotif of his work: The linguistic usage is relevant and should not be modified without necessity:

> The traditional definition of mathematics that has been given up to now does not say anything else than that mathematics is the science of quantities (*scientia quantorum*). So I hope that my definition will not be blamed for differing too much from the ordinary one. (cf. *Größenlehre,* Einleitung, § 2, Anm. in Bolzano 1975, p. 27)

Secondly, Bolzano is still convinced that a science cannot be univocally characterized by its domain of objects—and thus, even if mathematics is defined as a science of quantities, this need not mean that it can be applied only to quantities:

> However I have to explain that I did not keep the same expressions. One should rightly say that mathematics is a theory of quantities, only if the objects that are considered in the different mathematical sciences are quantities altogether and just because of the fact that they are considered in those sciences. But that is not the case. On the contrary, many mathematical sciences rather concern, at least partially, objects that are not quantities, even if the concepts of quantity and number are used to examine them. (cf. *Größenlehre*, Einleitung, § 2, Anm. in Bolzano 1975, p. 27)

Thirdly, he assumes a different, and more general meaning of the word quantity, as we will see in § 4. So, Bolzano reverts to the traditional definition of mathematics because he wants to preserve a well-established, almost idiomatic expression, but at the same time, he changes its meaning by giving a different explanation of the concept of quantity. The linguistic use, and the mathematical practice are maintained but the usual way of speaking is combined with a conceptual change. Besides, the reference to quantities that is suggested in the definition can be understood on pragmatic grounds: It is useful to underline the propaedeutic function of the general theory of quantities in mathematics.

So far, the evolution from the definition of mathematics as a theory of forms to the traditional definition of mathematics as a science of quantities did not appear as a radical change, but we will see in § 3 what further changes induced Bolzano to abandon the definition of mathematics as a theory of forms.

22.2.2 Mathematics Without Intuitions: A Truly Conceptual Science

A constant feature of Bolzano's anti-Kantianism is the refusal to grant intuitions any role in mathematics: the latter is a merely conceptual science. In the Appendix to *Beyträge*, where Bolzano makes his critique to Kant, concepts and intuitions are defined as follows: "All ideas are either intuitions, i.e. ideas of an individual,

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not contain the concept of a quantity or number at all, could never be established in mathematics if it were merely a *science of quantity*" (cf. *Beyträge*, I, § 3 in Russ 2004, p. 92).

or concepts, i.e. ideas of something general" (cf. *Beyträge*, Appendix, § 2, in Russ 2004, p. 132). Against Kant, Bolzano argues that there is no such a thing as pure intuition: Space and time are forms, but they are concepts, just like smell and colour. He also argues that arithmetic does not require the pure intuition of time in order to be universal and necessary knowledge, nor does geometry require the pure intuition of space. Mathematics is a conceptual science, that is to say, a science that contains just concepts. A nonconceptual judgment is, on the contrary, a judgment that contains at least an intuition. Mathematics does not contain any intuition. Its objects are not individual but general.

The harsh criticism of Kant's notion of an a priori intuition is due to Bolzano's strong belief that mathematics is a conceptual science. In the *Beyträge*, he explicitly defines it as "*a science which deals with the general laws (forms) to which things must conform [sich richten nach] in their existence [Dasein]*", and adds that "mathematics never deals with a single thing as an *individual* but always with whole *genera* [*Gattungen*]" (cf. *Beyträge*, § 8, in Russ 2004, p. 94). Having assumed the Kantian distinction between intuitions as ideas of an individual and concepts as ideas of something general, there is no doubt that mathematics, concerning only genera, is a conceptual science.

Bolzano wants to eliminate any appeal to intuition from mathematics. As a mathematician, he has to solve the problem of imaginary or ideal quantities, that is to say, concepts that do not have a corresponding intuition in mathematics (the infinite line, complicated spatial objects in stereometry, etc.). Bolzano does not question their possibility, but grounds it on the independence from intuition and imagination.

> The proposition that every straight line can be extended to infinity has no intuition behind it: The lines, which our imagination can picture, are not infinitely long. In stereometry, we are often concerned with such complicated spatial objects that even the most lively imagination is no longer able to imagine them clearly; but we, nonetheless, continue to calculate with our concepts and find truth (cf. Beyträge, Appendix, § 9, in Russ 2004, p. 136).[9]

22.2.3 Mathematics Contains Analytic and Synthetic Propositions

In the *Beyträge*, Bolzano maintained the traditional Kantian definition of analyticity, and he claimed that mathematics contains synthetic propositions (e.g. axioms) and analytic propositions, which play the role of definitions. In the *Wissenschaftslehre*, Bolzano introduced a different definition of analyticity, but mathematics still contains both analytic and synthetic propositions. Only their role is antithetic to the role they played in Kant's theory.

The distinction between analytic and synthetic judgments is introduced in the *Beyträge* with respect to judgments of the form <*S* is a kind of *P*>, which means that *S*

[9] For an analysis of Bolzano's criticism of Kant see also Rusnock 1999, and Rusnock 2000, ch. 4, where it is claimed that the theoretical criticism is associated in Bolzano with a practical confutation: the development of large parts of mathematics in a form that is free from intuition (Rusnock 1999, p. 45).

is a species of the genus *P*. If I can find a *differentia specifica D*, so that *S* is decomposable into *P* cum *D*, then the judgment is analytic: <*P* cum *D* is a kind of *P*>. If I cannot find *D*, then I can only decompose *S* into *P* cum *S*, which is but an apparent definition, and *S* is a simple concept. Bolzano mentions the following examples: (a) "A point is a spatial object" is a synthetic judgment, because it can only be decomposed into "A spatial object which is a point is a spatial object"; (b) "Human are animals", on the contrary, is analytic, because it can be decomposed into: "An animal who is rational is an animal".

> A classification of judgments quite different from those considered so far, which has, since Kant, become particularly important, is the classification into analytic and synthetic judgments. In our so-called necessity judgments, the subject appears as a species whose genus is the predicate. But this relation of species to genus can be of two kinds: Either there is a characteristic which can be thought of and stated in itself, which is added in thought as a *differentia specifica* to the genus (predicate *P*) to produce the species (subject *S*) or not. In the first case, the judgment is called analytic; in every other case, which may be any of the classes mentioned in § 15, it is called synthetic (cf. *Beyträge*, II § 17 in Russ 2004, p. 115).

The Kantian distinction between analytic and synthetic judgments is thus maintained: A judgment is called analytic if the predicate is contained directly, or indirectly, in the definition of the subject; every other judgment is synthetic.[10] Provided that one does not consider synthetic judgments as based on any intuition, then one might agree with Kant that the majority of propositions of arithmetic are synthetic.

> The principle of sufficient reason and the majority of propositions of arithmetic are, according to Kant's correct observation, synthetic propositions (cf. *Beyträge*, Appendix § 8 in Russ 2004, p. 135).

A new definition of analytic and synthetic propositions is presented by Bolzano in the *Wissenschaftslehre* (especially § 148), where it is grounded on a new theory of truth. Bolzano distinguishes between analyticity and logical analyticity: Both are associated with a proposition in itself, the objective counterpart of a sentence or of a judgment. Each proposition in itself has a degree of validity (*Gültigkeit*) with respect to some of its parts (representations in itself) that might be considered as variable. The degree of validity of a proposition with respect to one or more of its parts is expressed by the ratio of the number of true propositions and the number of all (objectual) propositions that are obtained by variation of that part or those parts of the proposition. A proposition is universally valid or invalid with respect to those parts when the ratio is 1 or 0, respectively. A proposition is analytic if it is universally valid or invalid with respect to at least one of its variable parts. A proposition is logically analytic if it is universally valid or invalid with respect to all its nonlogical parts. A proposition is synthetic if it is not analytic. Mathematical truths are partly analytic, partly synthetic.

> But suppose there is just a single [*auch nur ein einziger*] idea in it [in a proposition] which can be arbitrarily varied without disturbing its truth or falsity, i.e. if all the propositions produced by substituting for this idea any other idea we pleased are either true altogether or false altogether […] I permit myself, then, to call propositions of this kind, borrowing an

[10] "In other words an analytic judgement is such that the predicate is contained directly, or indirectly, in the definition of the subject, and every other one is synthetic" (cf. Beyträge, II § 17 in Russ 2004, p. 115).

> expression from Kant, analytic. All the rest, however, i.e. in which there is not a single idea that can be arbitrarily varied without affecting their truth or falsity, I call synthetic propositions. (Cf. Wissenschaftslehre, § 148 in Bolzano 1837, vol. 1, p. 83).[11]

To conclude, Bolzano does not change his mind concerning the fact that mathematical treatises include both analytic and synthetic propositions, even if, as we will see in § 3.4, the role of such propositions might vary according to a variation of their respective definitions. Nor does he renounce the idea that mathematics is a truly conceptual science, or that its domain includes other objects besides quantities.

22.3 Relevant Changes Between *Beyträge* and *Größenlehre*

22.3.1 Changing the Definition of Mathematics

A first undeniable difference between the *Beyträge* and the *Größenlehre* concerns the definition of mathematics itself. In the *Beyträge,* Bolzano criticized, as we have already mentioned in § 2.1, the traditional definition of mathematics as a theory of quantities, and suggested an alternative characterization as a theory of forms.

> I therefore think that mathematics should best be defined as a science which deals with the general laws (forms) to which things must conform in their existence. By the word "things" I understand here not merely those which possess an objective existence independent of our consciousness, but also those which simply exist in our imagination, either as individuals (i.e. intuitions) or simply as general concepts, in other words, everything which can in general be an object of our capacity for representation. Furthermore if I say that mathematics deals with the laws to which these things conform in their existence, this indicates that our science is concerned not with the proofs of the existence of these things but only with the condition of their possibility (cf. *Beyträge*, I, § 8, Russ 2004, p. 94).

Some years later, in the unfinished work *Größenlehre*, he turned back to the traditional definition:

> When one defines *Mathematics* as a science of quantities, and I basically turned back to such a definition, one undoubtedly assumes the word quantity in a broader meaning, because one certainly considers the *Theory of numbers* as a mathematical discipline, and as one of the most important disciplines. (cf. *Größenlehre,* Einleitung, § 1 in Bolzano 1975, p. 25)

22.3.2 Abandoning the Sharp Distinction Between Mathematics and Other Sciences

In the *Größenlehre*, the sharp distinction between mathematics and other sciences that Bolzano had defended in the *Beyträge* is considered as unattainable, or at least

[11] For the criticism of Kant, see also § 315 in Bolzano (1837, vol. 3, 246 ff.).

as incompatible with the usual linguistic practice of mathematicians. And the latter "mathematical need" has now become more important than the "philosophical" need for a foundation of science that might account for a sharp disciplinary distinction.

> […] a science deserves to be called mathematics if a considerable part of its theory contains determinations of quantity whose correctness might be understood only on the basis of considerations on the nature of magnitudes, considerations that require a proper introduction. This addition will probably appear to many as objectionable, and so it appeared to me—I make no secret of it—since it reduces the difference between mathematical sciences and non mathematical sciences to a "more or less" question. I do not deny this might be a mischief, but I do not see how one could avoid it, without determining the concept of mathematics in a way that differs radically from the dominant linguistic use and that will originate more confusion than advantages. […] Anyway, this seems to me to have been the rule followed by mathematicians, as they increased the number of the mathematical sciences […]. (cf. *Größenlehre,* Einleitung, § 2, Anm. in Bolzano 1975, p. 29)

This change is related to Bolzano's overcoming his interest in foundational questions such as demarcation, and in particular to his overcoming the urgency to give a definition that is specular to the one given by Kant (see further § 3.5). By the way, it is to be noted that these criteria are not only typical features of the Kantian conception of mathematics but also necessary conditions for a satisfactory definition of a scientific discipline according to the standards that became widespread after the flourishing of encyclopedias in the eighteenth century: A science is defined by its position in the tree of knowledge. Besides, the opposition to philosophy was a standard way to account for the difference in certainty, rigor and intersubjective agreement between the two disciplines in the "geometric century".[12]

22.3.3 Mathematics Does Not Concern the Conditions of Possibility of Objects that Might Come to Existence

The definition of mathematics as a theory of forms explained the opposition between philosophy and mathematics:

> the former concerns itself with the question, how must things be made in order that they should be possible? The latter raises the question, which things are real—and indeed (because it is to be answered *a priori*)—*necessarily real*? Or still more briefly, *mathematics* would *deal* with *hypothetical necessity, metaphysics with absolute necessity*. (cf. *Beyträge*, I. § 9, in Russ 2004, pp. 94–95)

Nonetheless, the definition implied that mathematics, dealing with the conditions of possibility of things, applies only to things that might become actual. This definition of mathematics and philosophy is abandoned in the *Größenlehre* because the foundational problem of demarcation has become less urgent, since Bolzano is more interested in giving an appropriate role to logic rather than in giving a symmetric and opposite definition of philosophy and mathematics. But it is also aban-

[12] For a characterization of the era between Spinoza and Kant as a "geometric century", see Basso (2004).

doned because Bolzano has developed, in the meantime, his logical theory of ideas in themselves in the *Wissenschaftslehre*. If mathematics has to maintain the same generality that it had in the *Beyträge*, it should apply to all things, and thus to ideas in themselves too, which are not and cannot become actual.

In the *Beyträge,* mathematics is a hypothetical science: It concerns the conditions of the possible existence of objects—not only real objects but also objects that exist only in the imagination.

> I therefore think that mathematics should best be defined as a science which deals with the general laws (forms) to which things must conform in their existence. By the word "things" I understand here not merely those which possess an objective existence independent of our consciousness, but also those which simply exist in our imagination, either as individuals (i.e. intuitions) or simply as general concepts, in other words, everything which can in general be an object of our capacity for representation. Furthermore if I say that mathematics deals with the laws to which these things conform in their existence, this indicates that our science is concerned not with the proofs of the existence of these things but only with the condition of their possibility. (cf. *Beyträge*, I, § 8, in Russ 2004, p. 94)

But from the *Wissenschaftslehre* onwards, Bolzano developed a new theory of ideas and propositions in themselves, and mathematics should concern such entities as well. Bolzano explicitly admits that he has changed his mind.

> More than thirty years ago I believed I could trace a more precise boundary between mathematics and the other sciences, as I attributed to mathematics all those truths that do not concern the real existence (*Daseyn*) but only the conditions for the possibility of existence. But I abandoned this thought as soon as I realized that mathematical theories do not refer only to things that are real or that might become real (i.e. to things that are possible). (Cf. Größenlehre, Einleitung, § 2, Anm. in Bolzano 1975, p. 30).[13]

22.3.4 The Different Roles Played by Analytic and Synthetic Judgments

As already mentioned in § 2.3, the different definition of analyticity adopted in the *Wissenschaftslehre* implies a different evaluation of the roles of analytic and synthetic judgments in scientific works, which in turn implies a further move against Kant.

The distinction between analytic and synthetic judgments is relevant to understand their respective roles in mathematics. In the *Beyträge*, analytic judgments cannot be considered as axioms, for they are composite and thus provable. They are actually linguistic propositions rather than judgments, because they inform us on different designations used to denote the objects rather than on the objects them-

[13] The change might appear less radical, if one takes into account a possible variation in the notion of possibility itself, which could amount to mere conceivability in the *Beyträge* and to the possibility to become actual in the *Größenlehre*. I thank Wolfgang Künne for this remark. According to the analysis made by Schnieder (2007, p. 18), this change in the notion of possibility would already be at stake in the *Wissenschaftslehre*, given that Bolzano opposes possible things and things that are not actual but could become actual (e.g. ideas and propositions in themselves).

selves. Like Kant, Bolzano considers them as not ampliative, and therefore as not properly deserving a place in a scientific system.

> From this definition, it now follows immediately that analytic judgments can never be considered as axioms; indeed, in my opinion, they do not even deserve the name of judgments, but only that of propositions; they teach us something new only as propositions, i.e. insofar as they are expressed in words, but not as judgments. In other words, the new (fact), which one can learn from them, never concerns concepts and things in themselves but at most only their designations. Therefore, they do not even deserve a place in a scientific system, and if they are used, it is only to recall the concept designated by a certain word, just as with conventions. In any case, it is decided even according to the usual view that analytic judgments are not axioms, for their truth is not recognized from them themselves, but from the definition of the subject (cf. Beyträge, II § 18 in Russ 2004, p. 115).

Synthetic judgments are axioms for two reasons. On the one hand, because "there are true definitions only for concepts which are composite, and therefore also decomposable again" (cf. *Beyträge,* II § 18 in Russ 2004, p. 104), that is to say, only analytic propositions might play the role of definitions. On the other hand, because axioms have to be unprovable and all analytic propositions are provable.[14] So, after having proved that there are some synthetic judgments (e.g. judgments whose subject is a simple concept),[15] Bolzano argues that mathematics has axioms, because there are simple concepts that belong properly to mathematics.

> If the foregoing is correct, the question can now be answered "Whether mathematics also has axioms"? Of course, if all mathematical concepts were definable concepts, then there could be no axioms in the mathematical discipline. But since there are simple concepts which belong properly to mathematics (§ 8), one certainly has to acknowledge actual axioms in it. The domain of the axioms stretches as far as that of the purely simple concepts: where the latter ends and the *definitions* begin, there also the axioms come to an end and the *theorems* begin (cf. *Beyträge*, II § 22 in Russ 2004, p. 119).

As a consequence of the different definition of analyticity given in the *Wissenschaftslehre* (see § 2.3), mathematics still contains both analytic and synthetic truths, but their role is quite different.

There are universal formulations of mathematical truths that are synthetic but if one instantiates them, one obtains an analytic truth. For example, "the angles of this triangle are together equal to two right angles" is analytic with respect to "this". Similarly, "the angles of an equilateral triangle are together equal to two right angles" is analytic with respect to "equilateral". On the contrary, "the angles of

[14] "I believe I have found out that all judgements whose subject or predicate are composite concepts must be provable judgements" (cf. *Beyträge*, II § 16 in Russ 2004, p. 114). "Hence it now follows that the really unprovable propositions, or axioms, are only to be sought in the class of those judgements in which both subject and predicate are completely simple concepts" (cf. *Beyträge*, II § 20 in Russ 2004, p. 117). "If therefore the word 'axiom' is to be taken in an objective sense we must understand by it a truth which we not only do not know how to prove but which is in itself unprovable" (cf. *Beyträge*, II § 11 in Russ 2004, p. 110).

[15] "Therefore if all our judgements were analytic there could also be no unprovable judgements, i.e. axioms at all. […] we want to try and demonstrate, in a way independent of § 15, that there actually are synthetic judgements. All judgements whose subject is a simple concept are thereby already synthetic" (cf. *Beyträge*, II § 19 in Russ 2004, p. 116).

any triangle are together equal to two right angles" is synthetic, and the previously mentioned truths are provable from this truth (cf. *Wissenschaftslehre*, § 197 in Bolzano 1837, vol. 2, 333 ff.). This example looks paradoxical: A universal proposition is considered to be synthetic whereas if one instantiates it, one obtains an analytic proposition. De Jong (1997) has suggested an interesting interpretation: A Kantian example of a synthetic a priori proposition that was considered to be grounded on intuition is transformed into an analytic proposition. Bolzano's criticism of Kant's recourse to intuitions is here more radical, and it explains why analytic truths deserve a place in a scientific system: Given the fact that they are not self-evident, some of them deserve not only a place but also a proof in the system, e.g. a derivation from a general synthetic principle.

> From these examples, one can already derive that not every analytic proposition expresses a self-evident truth, and thus the aim of teaching analytic propositions to somebody is not fully superfluous; on the contrary, it is quite clear that even pure analytic propositions are sometimes so remarkable that they not only deserve a place in a textbook but they also make us feel obliged to guarantee their truth with a proof. And, indeed, it cannot be denied that such analytic propositions, whose truth is not directly evident, can easily be known as true, after one has learned a synthetic truth from which they follow (cf. *Wissenschaftslehre*, § 447 in Bolzano 1837, vol. 4, p. 116).

22.3.5 A Progressive Distantiation from Kant

It is well known that the Kantian definition of mathematics as the "knowledge gained by reason from the construction of concepts" has been extremely influential in the early nineteenth century, and that Bolzano was among its harsher critics. As a matter of fact, Bolzano's criticism of Kant is one of the most coherent features of his epistemology: If the *Betrachtungen* apparently accept several Kantian remarks on geometry, from the *Beyträge* onwards, Bolzano never stops criticizing Kant's notion of a priori intuition, Kant's claim that mathematics contains propositions based on an a priori intuition of space and time, and the kind of distinction he introduced between philosophy and mathematics. These issues, briefly mentioned in the *Beyträge* (§ 9), in the *Größenlehre*, and in the *Paradoxes of the Infinite*—where Kant's "idea of space as a (subjective) form of intuition" is referred to as an unfortunate idea[16]—are extensively discussed in the Appendix to the *Beyträge*,[17] in the

[16] "Until finally Kant got the unfortunate idea, still repeated by many today, of considering space as well as time not to be something objective, but to be a mere (subjective) *form of our intuition*" (cf. Russ 2004, p. 646).

[17] "The critical philosophy seems to promise us one [a better definition] […] mathematics is a science of the construction of concepts (A712). […] For my part I wish to admit openly that I have not yet been able to convince myself of the truth of many doctrines in the critical philosophy, and especially of the correctness of the Kantian claims about pure intuitions and about the construction of concepts using them. I still believe that in the concept of a pure (i.e. a priori) intuition there already lies an intrinsic contradiction. Much less can I persuade myself that the concept of number

Wissenschaftslehre, in *Athanasia* and of course in Prihonsky's *Neuer Anti-Kant*.[18] But Bolzano's anti-Kantianism underwent a significant evolution.

In the *Beyträge*, the need to criticize Kant dictates Bolzano's agenda. His main aim is apparently that of deconstructing Kant's definition point by point. Where Kant speaks of intuition, Bolzano speaks of pure concepts; where Kant speaks of quantities, Bolzano speaks of forms; if Kant ignores logic, Bolzano develops it in details as part of an analysis of the notion of a mathematical proof. Besides, Bolzano's terminology is Kantian, because Bolzano adopts Kant's definition of intuition, concept, analytic, synthetic, etc. Thirdly, Bolzano himself makes a connection between the need of a new definition and Kant's criticism quoting the review of a work by Vieth (cf. § 4; cf. *Beyträge,* I, § 7, in Russ 2004, p. 93). Finally, like Kant, Bolzano's characterization of mathematics is developed by opposition to philosophy, and in order to explain why mathematics applies to a certain domain of objects, and thus how it can be sharply distinguished from other sciences.

From the *Wissenschaftslehre* onwards, a new logical theory and new definitions of the main concepts are introduced. I claim that this corresponds to a radicalization of the opposition to Kant, or at least to a form of opposition that is no more internal but rather external to the Kantian framework, because the return to the traditional definition of mathematics as a science of quantities was the only further anti-Kantian assumption that Bolzano could make.

To summarize, the changes in the conception of mathematics are due to changes in Bolzano's logic: The new theory of truth involves a different definition of analytic and synthetic judgments, and the introduction of ideas in themselves involves a different conception of mathematical entities. But they can also be related to a gradual overcome of Kant's terminology (e.g. not only the definition of analyticity but also the renouncement to define mathematics by opposition to philosophy), and to a radicalization of Bolzano's anti-Kantianism (e.g. the different interpretation of not only the role of analytic and synthetic truths in mathematics but also the return to the traditional definition that Kant had explicitly criticized).

22.4 Enlarging the Notion of Quantity

It is well known that in the *Beyträge*, Bolzano criticizes the definition of mathematics as a science of quantities saying that no matter how one defines quantities, the domain of mathematics will never correspond exactly to the domain of quantities. More generally, one could say that however one defines a class of objects, the domain of mathematics will never coincide exactly with it. So, better define mathematics as a science of forms rather than as a science of those objects which are called quantities.

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must necessarily be constructed in time and that consequently the intuition of time belongs essentially to arithmetic" (cf. *Beyträge*, Appendix, §§ 5–6 in Russ 2004, p. 93).

[18] Concerning the distinction between philosophy and mathematics, see in particular pp. 216, 217 (repr. in Prihonsky 2003, pp. 172, 173).

In § 7 of the *Beyträge*, there is another interesting quotation, whose author is here identified for the first time: It comes from a review of *Anfangsgründe der Mathematik* by Vieth (1805) published in the *Neue Leipziger Literaturzeitung*.[19] In the review, Leibniz is explicitly mentioned, and quantity is defined "as the object of mathematics only because it is the most general finite form", so that mathematics is by nature a general theory of forms. Bolzano remarks that he has

> included in the first books of his Miscellanea Mixta, just before he started his Miscellanea Mathematica, some reviews and even mathematical texts. Here is a list of them. [….] In Notebook III (towards the end) Vieth's Anfangsgründe der Mathematik.[20]

Vieth's book is quoted several times by Bolzano, for example, in *Miscellanea mathematica* (1814; cf. Bolzano 1990, 106 ff), where it is analysed in details, or in *Erste Begriffe der allegemeinen Größenlehre* (1816; cf. Bolzano 1977, p. 276), where Bolzano discusses Vieth's concept of a negative quantity, which is defined as a quantity that decreases some other quantity, or again in the *Größenlehre*. On the notion of quantity Bolzano declares that Vieth shares the same conception as Kästner, i.e. that quantity is something that increases (*vermehren*) and decreases (*vermindern*).[21]

In the review mentioned by Bolzano in the *Beyträge,* the author criticizes the Kantian definition of mathematics, and especially the idea that mathematics concerns only quantities that can be represented in space and time.[22] Against the traditional definition of quantity as something that increases or decreases, the reviewer introduces a more general notion of quantity as the most general form of finitude.[23]

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[19] Bolzano actually quotes the right number of the reviews, but mentions the name of the previous series: Leipziger Literaturzeitung. The quotation can be found in Neue Leipziger Literaturzeitung (July 1808, § 81, pp. 1288–1294. Cf. Anonymous 1808).

[20] "In den Miscellaneis mixtis, in den ersteren Heften habe ich, bevor ich noch einige Hefte wie diese für Mathematik hatte, Recensionen, auch mathematische Schriften eingetragen. Hier folgt ein Verzeichniss derselben. […] Im Heft III (gegen Ende) Vieths Anfangsgründe der Mathematik" (cf. Bolzano 2000, p. 146).

[21] As a traditional definition, he mentions the one by Hausen, Kästner, Horvath, Vieth, Voigt, Rothe, Kraushaar, Crelle, etc. As already mentioned in § 2.1, the definition goes back to Wolff.

[22] "On the one hand, mathematics does not only refer to things that can be represented in time and space; on the other hand, the things that can be represented in time and space are considered in mathematics only as quantities, because they can be constructed according to form and kind. For example, + and –, commensurable and incommensurable, straight and curve, homogeneous and inhomogeneous, continuous and discrete, aren't they mathematical concepts? Yet, they have nothing to do with quantity". "Aber die Mathematik bezieht sich weder allein auf Dinge, die sich in Zeit und Raum darstellen lassen, noch auch werden die Dinge, die sich in Zeit und Raum darstellen lassen, in der Matheamtilk allein in so fern betrachtet, als sie Größen sind, weil sie auch der Gestalt und Art nach construirt werden; z.B.+ und -, commensurabel und incommensurabel, gerade und krumm, gleichförmig und ungleichförmig, stetig und discret, sind doch wohl mathematische Begriffe? Dennoch aber haben sie mit Größe nichts zu thun" (cf. Anonymous 1808, p. 1291).

[23] "Quantity is an object of mathematics only inasmuch it is the most general form of finiteness, but mathematics, according to its nature, is a general theory of forms—and precisely, arithmetic inasmuch it concerns quantity as the general form of finite things, geometry inasmuch it concerns space as the general form of nature, chronology inasmuch it concerns the general form of forces, dynamics inasmuch it concerns the general form of forces that act in space—and it is composed

It should be noted that when Bolzano goes back to the definition of mathematics several years later, something has changed in between. On the one hand he has introduced a different definition of quantity, which can be found already in the *Miscellanea Mathematica*. Quantity is a

> species of things, between any two of those we can assert one and just one of the following reciprocal relations: either they are equal one to the other or one contains a part that is equal to the other. (cf. *Größenlehre*, Einleitung, § 1, in Bolzano 1975, pp. 25, 26)

This notion of quantity makes no reference to decomponibility in equal parts or to measurability, as Bolzano himself explains in *Über den Begriff der Größe und die verschiedenen Arten derselben* (1816). After having introduced the concepts of number (*Zahl*), relation (*Verhältniss*) and set (*Menge*), Bolzano presents the following definition of quantity (*Größe*):

> Each quality of an object has a quantity, if this quality can be considered as a set of parts in such a way that for any two things one of them contains something that is equal to the other, that is to say, these two things either are equal or in one of them there is as a part something that is equal to the other. And this property itself is called the quantity (*quantitas*) of the thing.[24]

Bolzano distinguishes between decomponibility in equal parts (which is not necessary) and the condition of being equal or unequal with respect to some other quantity (which is necessary). And the latter condition does not yet amount to measurability. Bolzano also clarifies that not all quantities are measurable, but just those for which one can determine a measure unit and a rule to determine how many equal parts of the measure unit are contained in the given quantity.[25]

In the Introduction to the *Einleitung zur Größenlehre,* Bolzano adds a note, and then cancels it, on pure mathematics, which is defined as the science of quantities *in abstracto*, i.e. considered independently from the genus quantities belong to (geometrical quantities, mechanical quantities and so on). Combining the new definition

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by all these forms in their internal further limitations". "Die Größe ist nur darum Gegenstand der Mathematik, weil sie die allgemeinste Form ist, endlich zu seyn, die Mathematik aber ihrer Natur nach eine allgemeine Formenlehre ist; und zwar Arithmetik insofern sie die Größe als die allgemeine Form endlicher Dinge, Goemetrie, insofern sie den Raum als die allgemeine Form der Natur, Zeitlehre, insofern sie die allgemeine Form der Kräfte, Bewegungslehre, insofern sie die allgemeine Form der im Raume wirkenden Kräfte betrachtet, und alle diese Formen in ihren innern, weitern Beschränkungen, ausbildet" (cf. Anonymous 1808, p. 1291).

[24] "Jede Beschaffenheit einer Sache hat eine Größe, wenn sich diese Beschaffenheit betrachten läßt als eine Menge von Theilen der Art, daß von je zweyen der eine allemahl in dem andern gleichkommendes Ding in sich faßt, d.h. daß diese zwey Theile entweder einander gleich kommen, oder daß in dem einen ein dem andern gleich kommendes Ding als Theil vohanden ist. Und diese Eigenschaft selbst heißt man die Großheit (*quantitas*) des Dinges" (cf. *Über den Begriff der Größe und die verschiedenen Arten derselben*, § 9, in Bolzano 1977, p. 195).

[25] Cf. *Über den Begriff der Größe und die verschiedenen Arten derselben*, §§ 11–12, in Bolzano (1977, p. 196). This definition radically differs from the one presented in the manuscript *Mathesis universalis* (1810), where measurability is still considered as an essential feature of quantities. (cf. Bolzano 1977, pp. 45, 46 and the French translation by Maigné and Sebestik 2010, p. 164) See also the manuscript *Theorie der reellen Zahlen* (dated around 1830–35), where measurability is a condition for the equality of quantities, as explained in Laugwitz 1964–1965, p. 408.

of quantity with the idea of a *mathesis universalis*, Bolzano applies mathematics to any kind of quantity, even abstract and nonmeasurable quantities. In the same text, he introduces the following definition:

> I believe that the best thing to do would be to distinguish two meanings of the word "quantity" (*Größe*), a broader and a narrower meaning. In a narrower sense one could understand by quantity what one usually calls continuous quantities; in a broader sense one could take the word to include both the continuous and the so-called non-continuous or discrete magnitudes, and nothing else. […] It is in this broader sense, I think, that we call any object a quantity *(quantum),* when we consider it as belonging to a species of things, between any two of those we can assert one and just one of the following reciprocal relations: either they are equal one to the other or one contains a part that is equal to the other. (cf. *Größenlehre, Einleitung*, § 1, in Bolzano 1975, pp. 25, 26)

22.5 Conclusion: Mathematics as a Mathesis Universalis

The analysis of Bolzano's changes in the definition of mathematics has shown that they are less radical than one might think. Several issues are common to the three works: (1) The definition of mathematics does not depend on its objects; (2) mathematics is exclusively conceptual; (3) its propositions are partly analytic and partly synthetic; and (4) its objects are not just numbers, concrete continuous magnitudes, or magnitudes that can be measured. Notwithstanding those similarities, there are relevant issues that change in the three works: (1) Mathematical objects are possible entities in 1810, but in 1837 and in 1848 they are conceived also as ideas in themselves, which cannot be possible, because they can never become actual; (2) mathematics is defined as a theory of forms in the *Beyträge* and as a science of quantities in the *Größenlehre*; (3) mathematics is defined by opposition to philosophy and to other scientific disciplines in the *Beyträge* but not in the *Größenlehre*; (4) in the *Beyträge*, Bolzano remarks that analytic truths should not occur in a scientific treatment, given that they are only conventions used to recall the concept designated by a certain word, but in the *Wissenschaftslehre*, analytic truths are considered as relevant enough to deserve a place in a scientific system, and sometimes even a proof; and (5) Bolzano's anti-Kantianism evolves from 1810 to 1848.

Given the elements of continuity and the elements of discontinuity that we have described in the previous paragraphs, it is now possible to evaluate the coherence of Bolzano's evolution. Bolzano clearly renounced the aim that he had praised in 1810—the idea of a sharp distinction between mathematics and other sciences—in favour of a more fluid and pragmatic classification of knowledge, but he always believed that mathematics cannot be adequately described by the indication of its domain of objects, and that mathematics does not concern only quantities, even if it is based on a quantitative approach to objects. Most differences concern minor points, or are perfectly understandable in the light of new definitions of the concepts involved. But what about the fundamental difference between forms that are possible and ideas or propositions in themselves that are not?

The difference is the result of Bolzano's continuous effort to defend the possibility of applying mathematical principles and theorems to the largest possible domain of objects. In the *Größenlehre*, Bolzano considers arithmetic and combinatorics as general sciences that can be applied to almost all kinds of things, and thus also to nonactual objects. This is true of arithmetic, because numbers are not real objects, but just determinations of objects that can be used to determine all other quantities.[26] And it is true of combinatorics, because the latter can be applied to any object that can be part of a whole.[27] Bolzano's conception of mathematics as a general *mathesis*—first presented in 1810—has not disappeared in the *Größenlehre*. It is exactly for the sake of generality that Bolzano abandons the previous definition of mathematics and modifies the meaning of "Größe" from quantity to quantity in general, as it was common in the tradition of the *mathesis universalis*.[28]

Bolzano's change in the definition of mathematics is thus a consequence of a deeper understanding of the meaning and the nature of the general *mathesis*. Bolzano's evolution is thus coherent. Rather than a change in his conception of mathematics, it is the result of a change in his logical and epistemological theory, and can be better understood in the light of an increased distance from the Kantian framework.

While Bolzano was still pervasively influenced by Kant in the *Beyträge,* so that Bolzano felt the need to present a definition of mathematics that should have the same advantages and characteristics of the Kantian definition, even if by opposition, his anti-Kantianism becomes much more radical as a consequence of the introduction of a new logical perspective. At this point, he does not need to produce a point-by-point counter-argumentation of Kant's theses: In particular, there is no more need for a definition of mathematics that might guarantee a sharp distinction between mathematics and other sciences, or explain the certainty of mathematics by opposition to philosophy. Bolzano's adhesion to the project of a *mathesis universalis* and his resistance to any bipartition of mathematics in theory of numbers and theory of magnitudes—numbers are themselves a kind of quantity—are coherent with his anti-Kantian conception of mathematics.

The idea of mathematics as being the science of quantities in general is the continuity element in Bolzano's evolution, which can be appreciated only if one devel-

[26] "Numbers are a particular genus of quantity, because they first present themselves to our view, and we thus use them—also because of their simplicity—to determine all other quantities in a more precise way". "Eine besondere Gattung von Größen, welche sich unsrer Betrachtung vor andern darbieten, deren wir uns eben desshalb u. ihrer Einfachheit wegen zur genauern Bestimmung aller übrigen Größen bedienen, sind — die Zahlen" (cf. *Größenlehre*, Einleitung, § 3.5, in Bolzano 1975, p. 34).

[27] "Because that is of course the domain of things to which these objects present themselves—in some respects—as parts that should be combined into a whole, and such that the combination is subject to a law of the following kind: for any finite set of objects, there is only a finite set of combinations". "Denn sicher ist doch das Gebiet der Gegenstände, auf welche sich diese Gegenstände in irgend einem Betrachte als Theile vorstellte, die in ein eigenes Ganze vereinigt werden sollen, und dass diese Vereinigung einem Gesetze von der Art unterliege, dass es bei einer endlichen Menge von ihnen nur eine endliche Menge Verbindungen gibt" (cf. *Größenlehre*, Einleitung, § 3.4, in Bolzano 1975, p. 36).

[28] On the characterization of quantities in the Größenlehre, see especially Sebestik (1992, p. 342).

ops a deep analysis of Bolzano's notion of quantity and of the changes it underwent with time. According to this interpretation, the conception of mathematics remains substantially unaltered, but Bolzano's investigation on the foundations of mathematics moves from a philosophical perspective that is still profoundly indebted to Kant's terminology and to Kant's definitional criteria towards a mathematical and algebraic conception which is much more concerned with a precise clarification of the primitive concepts of the discipline. It is exactly for this reason that Bolzano goes back to the traditional definition of mathematics: the linguistic use can be preserved, provided that one preliminarily clarifies the meaning of the concepts involved.

According to this interpretation, Bolzano's change in the definition of mathematics depends on a change in the logic (the introduction of ideas and propositions in themselves), which is, as I have shown elsewhere,[29] strictly connected to the solution of certain mathematical needs (e.g. the need to explain how mathematics might contain meaningful propositions concerning objectless ideas). The belief in the importance of logic for mathematics is probably the main reason for the radicalization of Bolzano's anti-Kantianism, and is coherently reflected in the evolution of his definition of mathematics. Bolzano's return to the traditional definition is the best compromise he could find in order to keep together the new logical theory with the idea of a *mathesis universalis*.

I have claimed in previous work (see Cantù 2001) that the need to legitimate the meaningfulness of certain contradictory ideas in mathematics was one of the reasons for Bolzano's development of a theory of objectless ideas, which I interpreted by a comparison with Leibniz's notions of *cogitatio possibili*s and *chimaera* in the *New Essays*. Something similar can be claimed in the case of the definition of mathematics: the need to legitimate the use of imaginary quantities in mathematics was one of the reasons for Bolzano's return to an old definition which still expresses the conception of mathematics as a *scientia universalis*. A comparison with Leibniz is indirectly suggested by Bolzano himself in the *Beyträge*, even if the name of Leibniz is mentioned just once (or rather the Leibniz-Wolff school is mentioned), and in a slightly different context (in the second section of the *Beyträge*, § 1, concerning the generality of the mathematical method which can be used in the presentation of any science), as Bolzano recalls the review of the book by Vieth, where Leibniz is praised for being, unlike Kant, mathematician and philosopher at the same time.[30]

To conclude, my general claim is that both the introduction of a new definition in the *Beyträge* and the return to the traditional definition of mathematics in the

[29] Cf. Cantù (2006) and Cantù (2003a). Both papers are extracted from the dissertation *Objectless ideas in the Wissenschaftslehre of B. Bolzano* discussed in 2001 at the University of Genève (M.A. Philosophy and History of Logic) under the supervision of Kevin Mulligan, to whom I am deeply indebted for having introduced me to the study of Bolzano's works. For a criticism of my interpretation of the partition of ideas in real and imaginary see Frechette 2010, pp. 104–116.

[30] "We know very well that these definitions come from a famous philosopher; yet he had better have been at the same time a mathematician, like Leibniz, in order to determine successfully the fundamental concepts of mathematics". "Wir wissen es wohl, diese Definitionen rühren von einem berühmten Philosophen her; der aber zugleich hätte Mathematiker seyn müssen, wie Leibnitz, wenn er mit Erfolg die mathematischen Grundbegriffe hätte bestimmen sollen" (Anonymous 1808, p. 1291).

Größenlehre can be interpreted as a change in terminology but not as a radical change in Bolzano's conception of mathematics. The change of definition is a coherent development of two fundamental ideas of Bolzano: (1) Kant's conception of mathematics is inadequate and (2) mathematics is a *scientia universalis*. Changes are the result of the fact that Bolzano distanced himself more and more from Kant's perspective—because he developed a new logic as a result of certain urgent mathematical needs—and also from the traditional habit to define mathematics by opposition to other sciences, especially philosophy, as it was mostly the case in the eighteenth century encyclopedias and dictionaries.

In other words, both definitions of mathematics (as a theory of forms and as a theory of quantities) are opposed to Kant's definition, the second more than the first. Besides, both definitions arise from Bolzano's understanding of mathematics as a universal *mathesis,* but the second is based on a different notion of quantity. In both cases, the change is interpreted as due to Bolzano's urgency to solve a specific mathematical problem: the question of contradictory concepts.

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Chapter 23
Le direct et l'oblique: sur quelques aspects antiques et médiévaux de la théorie brentanienne des relatifs

Alain de Libera

Abstract La théorie adverbiale du jugement chez Brentano en tant qu'elle va de pair avec la distinction du modus rectus et du modus obliquus peut apparaître comme une interprétation originale de la théorie de la connotation. On montre que la théorie des noms « connotatifs » et des « noms relatifs » de John Stuart Mill éclaire effectivement l'horizon conceptuel où s'inscrit la distinction brentanienne des deux modes. Transposé à l'acte de penser brentanien, la thèse de Stuart Mill sur les « noms corrélatifs » revient à dire que 'B est-pensé-par A' et 'A pense-B' connotent exactement le même fait: qu'il y a un A-pensant-B. C'est une des premières amorces de l'adverbialisme. Mais, en ce qui concerne Brentano, c'est loin d'être la seule. On analyse ici deux autres dispositifs: la théorie aristotélicienne des relatifs, telle que l'exposent quelques textes des Catégories et de la Métaphysique; la distinction entre trois types de relations formulée par Thomas d'Aquin dans la Iª Pars, q. 13 a. 7, sur la base d'une distinction générale entre « relations réelles » et « relations de. On montre que le troisième type de relation défini par Thomas, où une chose devient ou cesse d'être connue en vertu des états intentionnels d'un connaissant, peut être énoncé sous la forme 'aR3b' où a, le connaissant, a une relation réelle à b, le connaissable, & le sensible b a une relation de raison à a & b acquiert une relation à a du fait d'un changement dans les propriétés de a. C'est cette relation qui caractérise la relation intentionnelle dans la *Deskriptive Psychologie*. Après une brève comparaison des thèses de Brentano avec celles de Reid et d'Ockham sur la perception, on revient sur le débat Sauer-Chisholm concernant l'*Intentionality-thesis*. On présente quelques arguments en faveur d'une interprétation continuiste, selon laquelle Brentano affine d'abord sa théorie de la relation intentionnelle dans un sens qui incline au réisme, puis qui en fait partie intégrante. On soutient que les modifications apportées étaient appelées par les caractéristiques mêmes de ses premières théories sur l'inexistence intentionnelle et leur enracinement dans un certain aristotélisme, et qu'elles ont revêtu la forme d'une marche progressive, constante et raisonnée vers l'adverbialisme, vu par Brentano comme l'authentique position d'Aristote.

Keywords Thomas Reid · Franz Brentano · Aristotle · Relation—relativa—relata · External denomination

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On évoque généralement les rapports de Brentano à la scolastique à partir d'une poignée de citations de la *Psychologie du point de vue empirique*. On se concentre sur quelques lignes consacrées à la (re)découverte de ce qu'on appelle la « thèse de l'intentionnalité » *(Intentionality-thesis)*. On évoque parfois aussi, mais à un degré moindre, la « théorie de l'*inner perception* » *(Innere Wahrnehmung)*. Brentano, lui-même, nous y invite en un sens, si l'on en croit Bartok:

> He [Brentano] insisted that the central doctrines of his psychology, the doctrines of intentionality and inner perception, were doctrines that had clear precedents in the work of Aristotle and the Scholastics. It is in deference to these predecessors that Brentano spoke of his own versions of these doctrines as merely "reviving" traditional Aristotelian or Scholastic teachings in a modern context. (Bartok 2005, pp. 437–460)

De « clairs précédents »… mais lesquels? Il s'agit chaque fois d'Aristote, tant pour la thèse de l'intentionnalité[1] que pour celle de l'inner perception[2]. Et l'idée elle-même ne fait pas l'unanimité: elle est vivement critiquée par McDonnell[3]. Dans « Brentano's concept of intentionality », Dale Jacquette (2004, p. 99) élargit le spectre. Il mentionne Aristote, les médiévaux (Thomas d'Aquin, Scot et Ockham)[4], et, pour la philosophie moderne (*Early modern*): « the quasi-empiricist common sense philosophy of Thomas Reid », dans laquelle « the intentionality of thought resurfaces as a distinguishing feature of mind ». Jacquette n'entre pas dans les détails,

[1] Bartok (2005, 454, n. 60): « Specifically, Brentano saw an anticipation of his intentionality thesis in Aristotle's "doctrine of assimilation", according to which in both sensation and intellection the soul becomes in a sense similar to or identical with the thing being sensed (i.e. it takes on the form of the thing but not its matter) (De An. 417a17, 418a3, 429a16–18, 430a14, 431b20).».

[2] « He also saw an anticipation of his doctrine of inner perception in Aristotle's claim in De An. III.2 (425b12–15) that it is through sight itself that we are aware that we are seeing (PES, I.125/88). »

[3] Cf. C. McDonnell (2006a, p. 155, n 74): « Bartok's recent reiteration that 'He [Brentano] insisted that the central doctrines of his psychology […] had clear precedents in the work of Aristotle and the Scholastics' », is just […] a reiteration of Brentano's own misleading, self-interpretation. » Les références fournies par Bartok n'émeuvent pas McDonnell, qui conteste formellement les deux points: « Brentano develops two entirely un-Scholastic-Aristotelian doctrines of 'intentional relation (in the acts of consciousness)' and 'intentional object (in the mentally active subject)'. And Brentano means at least four different things by inner perception, only one of them, strictly speaking, is of clear Aristotelian ancestry, namely, 'incidental awareness'. » Sur le rapport Brentano-Thomas, cf. McDonnell (2006a, p. 159): « Brentano's self-interpretation of his concurrence with the Thomistic-Aristotelian epistemological concept of the intentional indwelling of the 'sensed object without its matter' in the soul of the knower both in the footnotes appended to the 1874 passage and added to the 1911 re-issue, and Spiegelberg's and many others' re-iteration of that self-interpretation, all overlook real and major conceptual differences between the way in which 'the species' or 'intentio', qua abstracted form, is said to be present in the soul of the knower in Thomistic-Aristotelian theory of knowledge and the way in which Brentano in the actual 1874 passage regards the presence of the intentional object of sense, and a fortiori the presence of any intentional object as an immanent content residing in consciousness. » (Voir dans le même sens, la version brève: McDonnell 2006b).

[4] Jacquette mentionne (99) « … the medieval tradition that took its inspiration from Aristotle's logic and philosophical psychology, particularly […] the writings of Thomas Aquinas, through whose commentaries Brentano acknowledges he interpreted Aristotle, but also […] the remarks on psychology of other empirically minded medieval thinkers such as Duns Scotus and William of Ockham ».

mais il donne clairement à entendre que Brentano est allé plus loin que ses prédécesseurs[5]. On veut bien le croire, mais le dossier est mince. Reid n'est cité que deux fois dans le volume, et l'unique référence fournie par Jacquette n'est pas décisive[6]. Quant aux médiévaux, ils n'apparaissent que génériquement, de seconde main, et en note. Jacquette renvoie aux sources historiographiques standard, de Hedwig à Spiegelberg (à savoir: Hedwig 1978, 1979; H. Spiegelberg 1936, 1978; Marras, 1976), Bartok ajoute Sorabji et Volpi[7]. Depuis les années 2005, la bibliographie s'est enrichie grâce aux travaux de C. McDonnell, L. Cesalli (2008a, 2008b, 2009), J.-F. Courtine, et quelques autres (principalement Chrudzimski 2001; Antonelli 2009; Fréchette 2011). De nouvelles notions sont venues sur le devant de la scène comme celles de « détermination relative » ou de « mode direct » et de « mode latéral » de la (re)présentation, qui ont singulièrement élargi l'horizon d'investigation historique, en l'ajustant, hélas encore très incomplètement, aux avancées théoriques proprement dites, réalisées dans des domaines comme la théorie relationnelle de l'acte défendue par Kevin Mulligan[8]. On reviendra ici sur la théorie des « relatifs », par le biais de la distinction entre *modus rectus* et *modus* obliquus.

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[5] Jacquette (2004, p. 100): « He not only identifies intentionality as the distinctive mark of the mental, but makes intentionality the foundation for an empirical scientific philosophy of mind that far surpasses anything that had previously been contemplated by Aristotle, the medieval thinkers, or Reid. ».

[6] Jacquette (2004, p. 125, n 4): « Thomas Reid, *An Inquiry into the Human Mind, on the Principles of Common Sense* [1764], ed., Timothy J. Duggan (Chicago: University of Chicago Press, 1970), Chapter 5, § 3, especially pp. 65–7. » En fait, s'agissant de Reid, le meilleur témoignage est évidemment celui de Brentano lui-même, dans une dictée du 3 septembre 1916 préservée sous forme dactylographiée dans le *Nachlaß* de la Houghton Library à Harvard, sous le titre *Was an Reid zu Loben (Dazu was an Ihm zu Missbilligen)*. Dans ce texte curieusement négligé, Brentano fait entre autres crédit à Reid, d'une part, d'avoir clairement rejeté comme « impropre » la notion courante d'*immanence du pensé au pensant* (« Er erkennt, dass man, wenn man sagt, es sei das, was man denke, im Geiste des Denkenden, einer sehr uneigentlichen Redeweise sich bedient »), puisque « Was so im Geiste ist, ist im eigentlichen Sinne nicht »); et, d'autre part, d'avoir soutenu une variante de ce que nous appellerions aujourd'hui, en termes hintikkiens, *KK-thesis* ou, en termes hérités d'Aristote, *incidental awareness*, ce en maintenant que « nous ne pensons rien sans être conscients de nous-même comme pensant(s) ». (Cf., pour tout cela, F. Brentano (1975, pp. 1–18).

[7] Bartok (2005): « On Brentano's relation to Aristotle and the Scholastics see […] R. Sorabji, "From Aristotle to Brentano: The Development of the Concept of Intentionality", in H. Blumenthal & H. Robinson (éd.), Aristotle and the Later Tradition, Oxford, OUP, 1991 (p. 227–259); and F. Volpi, "War Brentano ein Aristoteliker? Zu Brentanos und Aristoteles' Auffassung der Psychologie als Wissenschaft", Brentano Studien, 2 (1989), p. 13–29 ».

[8] Cf. Mulligan & Smith (1986). Naturellement, l'ensemble des contributions de K. Mulligan à la pensée de Brentano, de son école et, plus largement, de la philosophie autrichienne, constituent l'horizon de tout travail sur lesdites notions ou distinctions. Je leur suis particulièrement redevable, comme je dois à Kevin de m'être jeté, après maintes discussions genevoises, dans la lecture de Reid et de la philosophie écossaise. Puissent ces pages lui donner quelque idée de ma reconnaissance et de mon amitié.

La théorie des noms « connotatifs » et « non connotatifs » (« improprement dits *absolus* ») et celle des « noms relatifs » et « non relatifs » de John Stuart Mill éclaire l'horizon conceptuel où s'inscrit la distinction brentanienne du *modus rectus* et du *modus obliquus* [9]. Cet horizon est vaste: c'est celui de la *paronymie*, que j'ai décrit ailleurs comme un « échangeur conceptuel » impliqué dans ou associé à l'évolution de cinq ensembles de concepts, de thèses ou de problèmes fondamentaux pour l'archéologie du sujet-agent de la pensée. Ce rôle d'échangeur s'atteste par:

1. l'organisation de la théorie de la *prédication* sur la base d'une distinction entre prédication *essentielle* et prédication *dénominative*, absorbant et reformulant la distinction aristotélicienne entre prédication *par soi* et prédication *accidentelle;*
2. l'intervention de la dénomination dans l'élaboration de la théorie de la *connotation;*
3. la rencontre de la problématique de la dénomination avec celle de l'*intentionnalité* et du statut de l'*objectité intentionnelle*;
4. liée à la précédente, l'utilisation de la notion de dénomination extrinsèque dans la formulation de la distinction entre *concept formel* et *concept objectif;*
5. le rôle que jouent les diverses lectures et investissements théoriques de la paronymie dans la constitution du concept, de la théorie et des doctrines successives de l'*analogia entis.*

L'hypothèse d'une reprise chez Caterus de l'interprétation ockhamienne de l'idée comme *nomen connotativum* avancée par Laurence Renault (2000) dans son analyse de la notion catérienne de « réalité objective » illustre bien l'intersection des deux champs de la connotation et de la dénomination. Pour l'historien de Brentano, la thèse d'Ockham a l'avantage de faire intervenir la distinction entre signification directe et signification oblique, les *connotatifs* ockhamiens, étant définis comme des termes concrets signifiant directement *(in recto)* des substances singulières et secondairement, « à l'oblique » (*in obliquo*), c'est-à-dire connotant, les qualités singulières qu'ils permettent d'attribuer aux substances singulières. Il est clair, cependant, que le *Venerabilis inceptor* n'est pas la source obligée des analyses brentaniennes. La distinction des modes direct et indirect (latéral, oblique) est un

[9] L'importance du rôle des Mill (père et fils) dans la genèse de la pensée de Brentano est évidente. Dans la *Psychologie vom empirischen Standpunkt* (notée par la suite [PES]), Brentano (1924, 45–46, 1944, 226–227) fait l'éloge de John Stuart Mill qui « plus qu'aucun autre philosophe […] s'est approché de la vraie signification de la différence entre la représentation et le jugement » (« … einer richtigen Würdigung des Unterschiedes zwisch en Vorstellung und Urteil nahe gekommen ist »). La théorie millienne du jugement est, par ailleurs, la cible bien connue des critiques du « psychologisme », dont elle est souvent présentée comme le point de départ ou le premier ferment. Certains exemples de Mill se retrouvent à la fois chez Brentano et Heidegger. C'est le cas de la proposition 'A centaur is a fiction of the poets' (Stuart Mill [7]1878, I, Chap. 4, « Of propositions », § 1, 86), discutée par Heidegger ([2]1989, 289–290; 1985, 245–246). Je reviens sur l'ensemble du dossier dans de Libera (à paraître a). Sur le rapport de Brentano à la psychologie écossaise, cf. A. de Libera (2013).

lieu commun de la scolastique tardive[10]. Mais surtout, c'est chez Stuart Mill qu'on trouve les énoncés les plus proches de la théorie brentanienne des relatifs.

Les § 5 et 7 du livre I, Chap. ii (« Of names ») du *System of Logic* respectivement consacrés aux « Connotative and Non-connotative names » et aux « Relative and Non-relative names » méritent l'attention. Mill lui-même souligne que la distinction entre noms connotatifs et non connotatifs est l'une des plus importantes en philosophie (« … one of the most important distinctions which we shall have occasion to point out, and one of those which go deepest into the nature of language », Mill [7]1878, p. 31). Termes non connotatifs et connotatifs sont définis:

$TNC_{déf.}$ A non-connotative term is one which signifies a subject only, or an attribute only.

$TC_{déf.}$ A connotative term is one which denotes a subject, and implies an attribute.

'Jean', 'Londres', 'Angleterre' sont des noms qui signifient seulement un sujet; *'blancheur', 'longueur', 'vertu'*, seulement un attribut: aucun n'est connotatif. *'Blanc', 'long', 'vertueux',* en revanche, sont connotatifs.

Le mot *'blanc'* dénote toutes les choses blanches et implique (donne à entendre) ou, selon l'expression des Scolastiques, « connote » l'attribut blancheur (« The word '*white*', denotes all white things, as snow, paper, the foam of the sea, &c., and implies, or as it was termed by the schoolmen, connotes the attribute whiteness »). Tous les termes généraux concrets sont connotatifs. Le mot *'homme'* signifie à la fois tous les attributs qui constituent l'humain et toutes les choses existantes, les « sujets », qui les possèdent. On dit qu'il signifie les sujets *directement* et les attributs *indirectement*, qu'il « dénote » les premiers et implique, donne à entendre ou indique, d'un mot « connote », les seconds[11]. Les termes connotatifs sont également appelés « dénominatifs », « parce que le sujet qu'ils dénotent est dénommé par ou reçoit son nom de l'attribut qu'ils connotent »[12]. On dit donc que cet attribut « dénomme » ledit sujet, qu'il lui « donne un nom commun ». Aucun nom propre n'est connotatif: un nom propre dénote les individus qu'il sert à appeler, mais il n'indique ni n'implique aucun attribut comme leur appartenant. Dans une longue *footnote*, John discute la théorie de celui qui a remis en usage le terme « connotation » à l'époque moderne, autrement dit son propre père, curieusement présenté comme « Monsieur James Mill ».

L'auteur de *L'Analyse des phénomènes de l'esprit humain* utilise le mot conformément à son étymologie: connoter c'est pour lui « indiquer directement une chose » (autrement dit: signifier), tout en « incluant une référence tacite à autre chose ». Pour les noms concrets généraux, les deux Mill ont une opinion inverse: pour Mill-le-Père, la signification d'un nom résidant dans l'attribut, le

[10] Sur la théorie ockhamiste de la connotation, voir Panaccio (2000, 297–316; 2004, Chap. 4, 63–83). Voir également, Panaccio & Bendwell (2006, 281–301).

[11] Mill ([7]1878, p. 32): « The name, therefore, is said to signify the subjects directly, the attributes indirectly; it denotes the subjects, and implies, or involves, or indicates, or as we shall say henceforth connotes, the attributes. It is a connotative name. ».

[12] Sur le rapport entre dénomination (paronymie) et connotation dans la scolastique, cf. de Libera (1999).

nom général concret « note l'attribut et connote les choses qui le possèdent »: les noms abstraits sont donc « proprement des noms concrets dont on a laissé de côté la connotation »; pour Mill-le-Fils, c'est plutôt la dénotation qui est mise de côté, « ce qui était auparavant connoté devenant le tout de la signification »[13]. Pour justifier son choix, ce dernier invoque « l'urgente nécessité de trouver un terme exclusivement destiné à exprimer la manière dont un nom général concret sert à désigner les attributs contenus dans sa signification ». Tant d'erreurs eussent été évitées, si l'usage commun avait disposé d'un mot « exprimant exactement ce que signifie le terme *connoter* » tel que l'entend Stuart Mill! Ce mot, « connoter », les scolastiques, « auxquels nous devons la majeure partie de notre langage logique » l'utilisaient, et précisément dans la bonne acception. De fait, si ici ou là ils semblent s'accorder avec Mill-le-Père, quand ils « définissent spécifiquement comme terme technique » la connotation, « avec l'admirable précision qui caractérise toujours leurs définitions », ils expliquent clairement que « rien ne peut être dit *'connoté' sinon* des *formes*, ce qui, en général, dans leurs écrits est synonyme d'*attributs* » (Mill [7]1878, pp. 42–43). Cet éloge de la scolastique ne surprendra pas un lecteur attentif du *System of Logic*, qui, comme on l'oublie trop souvent, s'ouvre sur deux citations de Condorcet et de Hamilton rappelant ce que, gâce à la logique, lui doivent tant la « bonne philosophie » que les « langues vulgaires »:

[13] Mill ([7]1878, p. 42): « Before quitting the subject of connotative names, it is proper to observe, that the first writer who, in our times, has adopted from the schoolmen the word '*to connote*', Mr. James Mill, in his *Analysis of the Phenomena of the Human Mind*, employs it in a signification different from that in which it is here used. He uses the word in a sense coextensive with its etymology, applying it to every case in which a name, while pointing directly to one thing, (which is consequently termed its signification,) includes also a tacit reference to some other thing. In the case considered in the text, that of concrete general names, his language and mine are the converse of one another. Considering (very justly) the signification of the name to lie in the attribute, he speaks of the word as noting the attribute, and connoting the things possessing the attribute. And he describes abstract names as being properly concrete names with their connotation dropped: whereas, in my view, it is the denotation which would be said to be dropped, what was previously connoted becoming the whole signification. » Un des premiers (et rares) exposés de la théorie *james*-millienne de la connotation est Théodule Ribot ([7]1870, pp. 68–69), qui la résume ainsi: pour l'auteur de *L'Analyse des phénomènes de l'esprit humain*, « […] les termes concrets sont des termes connotatifs, les termes abstraits des termes non connotatifs, c'est-à-dire que les termes concrets, tout en exprimant une ou plusieurs qualités qui est leur principale signification ou notation, connotent l'objet auquel les qualités appartiennent. Ainsi le concret "rouge" connote toujours quelque chose de rouge, comme une rose. […] comment se forme l'abstrait? Il se forme du concret et note précisément ce qui est noté par le concret, *mais en rejetant la connotation*. Ainsi, dans rouge enlevez la connolation, vous avez rougeur; dans chaud enlevez la connotation, vous avez chaleur. Rouge signifie quelque chose de rouge, rougeur signifie le rouge sans quelque chose. » La même théorie de la formation des abstraits par *retrait de la connotation* vaut pour l'espace, l'étendue, le temps (« Enlevez la connotation de "quelque chose de présent", de "quelque chose de passé", et de "quelque chose de futur", vous avez passé, présent, futur. Mais ces trois choses, c'est le temps. C'est un terme abstrait, enveloppant la signification de ces trois abtraits distincts »), et le mouvement (72: « le mouvement [est] simplement le mouvant, moins la connotation »). On aura garde d'oublier que Brentano fait l'éloge de Ribot et de son livre, « qui donne en particulier un très bel aperçu des théories psychologiques » de Spencer (cf. PES, 26–27; trad. fr. 210–211).

> La scolastique, qui produisit dans la logique, comme dans la morale, et dans une partie de la métaphysique, une subtilité, une précision d'idées, dont l'habitude inconnue aux anciens, a contribué; plus qu'on ne croit au progrès de la bonne philosophie.—Condorcet, *Vie de Turgot*.
> To the schoolmen the vulgar languages are principally indebted for what precision and analytic subtlety they possess.—Sir W. Hamilton, *Discussions in Philosophy*.

La théorie de la connotation est mobilisée dans le § 7 sur les noms relatifs et non relatifs (plutôt que « noms absolus »—Mill rejetant, derechef, le mot « absolu », dans une page savoureuse):

> The fifth leading division of names is into relative and absolute, or let us rather say, relative and non-relative; for the word '*absolute*' is put upon much too hard duty in metaphysics, not to be willingly spared when its services can be dispensed with. It resembles the word '*civil*' in the language of jurisprudence, which stands for the opposite of *criminal*, the opposite of *ecclesiastical*, the opposite of *military*, the opposite of *political* in short, the opposite of any positive word which wants a negative (45).

Les noms relatifs sont les noms comme « *father, son; ruler, subject; like; equal; unlike; unequal; longer, shorter; cause, effec*t ». Leur « propriété caractéristique est d'être toujours donnés par paires ». Tout nom relatif qui est prédiqué d'un objet « suppose un autre objet (ou d'autres objets) dont on peut prédiquer ce même nom ou un autre nom relatif qui est dit *corrélatif* du premier »:

> Thus, when we call any person a *son*, we suppose other persons who must be called *parents*. When we call any event a *cause*, we suppose another event which is an *effect*. When we say of any distance that it is *longer*, we suppose another distance which is *shorter*. When we say of any object that it is *like*, we mean that it is *like* some other object, which is also said to be *like* the first. In this last case both objects receive the same name; the relative term is its own correlative (44–45).

Quand les relatifs sont concrets, « ils sont comme tous les autres noms généraux concrets »: *connotatifs*. « Ils dénotent un sujet et connotent un attribut », chacun d'eux *ayant* ou *pouvant avoir* un nom abstrait correspondant « pour dénoter l'attribut connoté par le concret ». Le concret *'like'* a l'abstrait *'likeness'*, les concrets *'father'* et *'son'*, les abstraits *'paternity'* et *'filiety'* ou '*sonship'*. Autrement dit: le nom concret connote un attribut, et l'abstrait correspondant dénote cet attribut. La question est: « De quelle nature est cet attribut? » « En quoi consiste la particularité de la connotation d'un nom relatif? »

Certains soutiennent que l'attribut signifié par un nom relatif est une relation, qu'ils renoncent à définir, y voyant « quelque chose de particulièrement caché et mystérieux ». Pour Stuart Mill au contraire, les noms relatifs ont un statut d'exemplarité: « en examinant leur signification », « la nature de l'attribut qu'ils connotent », on peut avoir une « perspective claire sur la nature de tous les attributs, de tout ce qui est signifié par un attribut ». Le point décisif, capital à notre sens, pour déterminer le *champ de présence* de la théorie brentanienne des relatifs est ainsi exprimé par l'auteur du *System of Logic*:

1. Dans n'importe quelle paire de noms corrélatifs, par exemple *père* et *fils*, les objets dénotés par les noms sont différents, mais tous deux, en un certain sens, connotent la même chose.

2. On ne peut dire qu'ils connotent le même attribut: être un père n'est pas la même chose qu'être un fils.
3. Toutefois, quand on appelle 'père' un homme, et 'fils' un autre, « ce que nous voulons affirmer est un ensemble de faits qui sont strictement identiques dans les deux cas ».
4. Prédiquer de A qu'il est le père de B, et de B, qu'il est le fils de A, c'est « énoncer un seul et même fait avec des mots différents ».
5. Les deux propositions: 'A est le père de B' et 'B est le fils de A' sont « exactement équivalentes », « aucune n'asserte plus ni n'asserte moins que l'autre ».
6. La paternité de A et la *fili*-ité de B « ne sont pas deux faits, mais deux manières d'exprimer le même fait ».
7. Si l'on analyse ce fait, on voit qu'il consiste en « une série d'événements ou de phénomènes physiques dont A et B sont tous deux parties prenantes, et dont A et B tirent leurs noms ».
8. Ce que ces noms « connotent réellement » est cette « série d'événements » : c'est la signification—la « signification totale » – que chacun « est censé transmettre ».
9. Les séries d'événements « constituent la relation »: les scolastiques appellaient cela « le fondement de la relation », le « *fundamentum relationis* ».
10.
    i. De là que tout fait (ou série de faits) où deux objets différents sont impliqués, et qui est (ou sont) prédicable(s) des deux peut être considéré comme constituant un attribut de l'un ou un attribut de l'autre.
    ii. De là aussi que, si l'on considère l'attribut sous le premier aspect ou sous l'autre, il sera connoté par l'un ou par l'autre des noms corrélatifs[14].

En d'autres mots, 'père' connote le fait considéré comme constituant un attribut de A; 'fils' connote le même fait, en tant que constituant un attribut de B. Il est aussi propre sous un éclairage que sous l'autre. Un seul réquisit est nécessaire pour rendre compte de l'existence de noms relatifs: il faut que chaque fois qu'il y a *un fait concernant deux individus*, « un attribut fondé sur ce fait puisse être assigné *à l'un comme à l'autre* de ces individus ». On dit donc qu'un nom est relatif quand,

[14] Mill ([7]1878, pp. 45–46): « It is obvious, in fact, that if we take any two correlative names, father and son for instance, though the objects denoted by the names are different, they both, in a certain sense, connote the same thing. They cannot, indeed, be said to connote the same attribute: to be a father, is not the same thing as to be a son. But when we call one man a father another a son, what we mean to affirm is a set of facts which are exactly the same in both cases. To predicate of A that he is the father of B, and of B that he is the son of A, is to assert one and the same fact in different words. The two propositions are exactly equivalent: neither of them asserts more or asserts less than the other. The paternity of A and the filiety of B are not two facts, but two modes of expressing the same fact. That fact, when analysed, consists of a series of physical events or phenomena, in which both A and B are parties concerned, and from which they both derive names. What those names really connote, is this series of events: that is the meaning, and the whole meaning, which either of them is intended to convey. The series of events may be said to constitute the relation; the schoolmen called it the foundation of the relation, fundamentum relationis. In this manner any fact, or series of facts, in which two different objects are implicated, and which is therefore predicable of both of them, may be either considered as constituting an attribute of the one, or an attribute of the other. ».

a) « en plus et en dehors de l'objet qu'il dénote », « il implique dans sa signification l'existence d'un autre objet, qui tire lui aussi une *dénomination dérivée* du même fait sur lequel ce nom est fondé ». Pour exprimer les choses autrement, on peut encore dire qu'un nom est relatif quand, b) « alors même qu'il est le nom d'une chose », sa signification « ne peut être expliquée qu'en mentionnant une autre » chose, ou bien enfin qu'un nom est relatif quand c) il ne peut être employé significativement dans un discours « sans que le nom d'une autre chose que celle dont il est lui-même le nom soit exprimé ou compris »[15]. Ces trois définitions sont « au fond équivalentes », elles ne font qu'exprimer différemment une même « caractéristique distinctive », à savoir que tout attribut d'un objet pourrait sans contradiction continuer d'exister si aucun autre objet n'avait jamais existé, mais pas les attributs exprimés par des noms relatifs, qui « dans cette hypothèse » seraient tous « balayés »[16].

Transposé à l'acte de penser, dans l'horizon brentanien, la thèse de Stuart Mill sur les « noms corrélatifs » revient à dire que 'B est-pensé-par A' et 'A pense-B' connotent exactement *le même fait:* qu'il y a un *A-pensant-B*. La théorie adverbiale du jugement en tant qu'elle va de pair avec la distinction du *modus rectus* et du *modus obliquus* est une interprétation originale de la théorie de la connotation. Stuart Mill le dit clairement: c'est la connotation qui fait la signification:

> … whenever the names given to objects convey any information, that is, whenever they have properly any meaning, the meaning resides not in what they denote, but in what they connote. The only names of objects which connote nothing are proper names; and these have, strictly speaking, no signification. (Mill [7]1878, p. 36).

Penser c'est *co-notare*, co-noter, connoter. C'est ce que l'étymologie scolastique de la cogitation donnait à entendre: penser, cogiter, c'est co-agiter[17]. Quant à ce qui connecte la théorie des relatifs à la théorie adverbiale du jugement, la parole est à Aristote.

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La théorie adverbiale du jugement chez Brentano est étroitement solidaire de la distinction entre le mode direct et le mode indirect (oblique, latéral) de la représentation, du jugement et du sentiment. En cela se marque l'importance de la *théorie*

[15] Mill ([7]1878, p. 47): « A name, therefore, is said to be relative, when, over and above the object which it denotes, it implies in its signification the existence of another object, also deriving a denomination from the same fact which is the ground of the first name. Or (to express the same meaning in other words) a name is relative, when, being the name of one thing, its signification cannot be explained but by mentioning another. Or we may state it thus when the name cannot be employed in discourse so as to have a meaning, unless the name of some other thing than what it is itself the name of, be either expressed or understood. ».

[16] Mill ([7]1878, pp. 46–47): « These definitions are all, at bottom, equivalent, being modes of variously expressing this one distinctive circumstance that every other attribute of an object might, without any contradiction, be conceived still to exist if no object besides that one had ever existed but those of its attributes which are expressed by relative names, would on that supposition be swept away. ».

[17] Cf. Albert le Grand, (1978, I, Ia Pars, tract. VIII, q. 35, cap. 3, a. 2; 272, 63–65): « … cogitatio duobus modis dicitur, proprie scilicet et communiter. Proprie cogitatio est coagitatio eorum quae in mente sunt, et revolutio conceptuum mentis. ».

des catégories, donc aussi d'Aristote—de la *Kategorienlehre* aristotélicienne—dans la pensée brentanienne. Une des thèses centrales de l'ontologie aristotélicienne est que *seule la substance mérite d'être appelée un « être » au sens propre:* « Les autres choses ne sont appelées des êtres, que parce qu'elles sont ou des quantités de l'être proprement dit, ou des qualités, ou des affections de cet être, ou quelque autre détermination de ce genre […] car aucun de ces états n'a par lui-même naturellement une existence propre, ni ne peut être séparé de la substance » (Cf. Aristote, Métaph. VII 1, 1028a pp. 15–25, 347–348). Au Moyen Âge, on dit volontiers que seule la substance est *ens*, le reste n'est qu'*entis*, « [quelque chose] *de* l'étant », et non pas lui-même « étant ». Dire que « les accidents ne sont pas *entia* mais *entis* », c'est introduire la notion de cas, de « flexion » (πτῶσις) dans l'ontologie ou, plutôt, c'est confirmer l'importance du motif « casuel » dans l'ontologie d'Aristote. C'est Brentano qui, exploitant certaines remarques de Bonitz, a redonné à la « flexion » ses lettres de noblesse médiévales dans l'interprétation de la doctrine aristotélicienne des catégories. Ce n'est peut-être pas le trait dominant de sa lecture, mais on ne peut en nier la présence: c'est bel et bien à elle, à la πτῶσις, qu'il recourt quand il entend souligner que « ce n'est pas selon des différences spécifiques mais selon des modes d'être, c'est-à-dire selon une diversité de rapports à l'οὐσία que l'ὄν se subdivise en catégories » :

> Bonitz remarque, au sujet de l'expression πτῶσις, que « πτῶσις a chez Aristote à peu près la signification que nous attachons au terme de modification, en ce sens qu'il nous permet d'indiquer des altérations dans ce qui est accessoire et spécialisé mais sans préjudice d'une sauvegarde de l'essentiel ». Cela s'accorde parfaitement à notre principe de subdivision des catégories, d'après lequel ces genres suprêmes de l'être sont identiques quant à leur terme, et ne diffèrent que *relativement au mode selon lequel ils s'y rapportent*. (Brentano 1992, p. 166, n. 289)

Une théorie adverbiale du jugement a nécessairement un *double composant casuel* ontologique *et* psychologique. La polysémie de la copule "est" et le problème de l'unité du concept d'étant (« *Vieldeutigkeit des "ist" und Einheit des Begriffes Seiendes* », selon le titre d'une des sections de la *Kategorienlehre*) renvoient, qu'on le veuille ou non, au statut du πρός τι. Aucun concept ne peut mieux cerner le lieu de la rencontre entre *Sprachanalyse*, psychologie et ontologie que le πρός τι, impliqué qu'il est à la fois dans la position et/ou la solution du problème de l'unité problématique du sens de l'être[18] et dans la formulation d'une théorie de la relation intention-

[18] Du πρός τι modulé casuellement au πρὸς ἕν, il n'y a qu'un pas. Comme l'écrit Courtine (2008, p. 202): « Si l'être n'est pas un genre, s'il ne se donne à aucune saisie intuitive directe, il ne peut jamais être appréhendé qu'in *obliquo*, c'est-à-dire à travers le langage et le tour de langue où il s'énonce (τρόπος τῆς λέξεως mais aussi et indissociablement σχήμα τῆς κατήγοριας). La question directrice devient alors de savoir ce que signifie étant dans les différentes tournures langagières dans lesquelles le terme apparaît ou du moins qu'il sous-tend. » Sans πρός τι il n'y aurait pas d'analogie « par rapport à un même terme », donc pas la double unité d'analogie (ou théorie de la « double analogie de l'être »), que, dès 1862, Brentano lit dans la « diversité des acceptions de l'être d'après Aristote », quand il écrit que « les catégories sont des acceptions diverses de l'ὄν qui s'énonce à leur sujet κατ' ἀναλογίαν, et cela d'une double façon: selon l'analogie de proportionnalité et selon l'analogie par rapport à un même terme ». (Cf. Brentano 1992, p. 91).

nelle, où l'on peut voir le *ad aliquid* des traductions latines d'Aristote devenir le *Relativliches ('quasi-relatif')*. La notion même de « modification », dont Brentano fait si volontiers usage, garde, il nous le dit lui-même, quelque chose de la flexion, de l'élément *casuel* de la pensée.

La théorie aristotélicienne des relatifs est le premier laboratoire de la théorie adverbiale du jugement. Quand il définit les relatifs au chapitre 7 des *Catégories* Aristote fait tacitement intervenir le système des « cas »:

> On appelle relatives ces choses dont tout l'être consiste en ce qu'elles sont dites dépendre *d'*autres choses, ou se rapporter de quelque autre façon *à* autre chose: par exemple, le plus grand est ce dont tout l'être consiste à être dit d'une autre chose, car c'est *de* quelque chose qu'il est dit plus grand; et le double est ce dont tout l'être est d'être dit d'une autre chose, car c'est *de* quelque chose qu'il est dit le double; et il en est de même pour toutes les autres relations de ce genre. – Sont aussi des relatifs des termes tels que état, disposition, sensation, science, position. (Aristote, *Catégories,* 7, 6a36–6b3, Tricot, pp. 43–44)

La différence entre « dépendre *d'*autres choses » et « se rapporter d'une autre façon *à* autre chose » a une dimension casuelle. Comme l'explique bien Tricot, un relatif « dépend d'autres choses » *comme un terme dépend de son génitif:* c'est le cas du père, qui est « père du /d'un fils »: *pater est filii pater*, ou du maître qui est « maître d'esclave/d'un esclave »: *dominus est servi dominus*. Qui dit 'père' dit 'fils', au sens où précisément 'père' dit 'père d'un fils'. Un relatif peut encore « dépendre d'une chose de quelque autre façon », en dépendant d'un cas autre ou selon un autre cas, une autre flexion, que le génitif: que ce soit le datif, comme dans '*aequale est aequali aequale*', l'accusatif, comme dans '*verberans verberatum verberat*' ou l'ablatif, comme dans '*majus est minore majus*'. Et de préciser: « ces distinctions grammaticales » tirées du latin « sont évidemment inapplicables en français ». Sauf si l'on admet qu'il y a là aussi ou d'abord des *modes de penser*, et que la pensée se fléchit, se décline, comme le langage qui est censé l'exprimer en même temps que *dire ce qui est comme c'est*. La définition aristotélicienne des relatifs, d'une remarquable fixité, est potentiellement articulée sur cette différence de cas: « Sont des relatifs les termes dont l'essence est d'être dits *dépendre d'*autres choses ou *se rapporter de quelque façon à* autre chose » (6b6–8; Tricot, p. 44).

C'est une fois appliquée au rapport de la connaissance et du connaissable ou de la sensation et du sensible que la théorie aristotélicienne des relatifs apparaît, en-deçà du couple dénotation/connotation de Stuart Mill, mais en liaison avec lui, comme le lieu d'origine de la distinction entre mode direct et mode latéral. En *Catégories*, 7, 6b34–35, Aristote observe, à propos de la relation entre relatif et corrélatif, que ce qui distingue les termes comme « double » et « moitié » ou « maître » et « esclave », qui entretiennent une parfaite « relation réciproque », des termes comme « connaissable » et « connaissance » ou « sensible » et « sensation », c'est seulement que « dans l'expression, la forme grammaticale est différente », selon la traduction de P. Pellegrin et M. Crubellier[19]. En fait, c'est la πτῶσις, autrement dit le cas, la

[19] Aristote, *Catégories*, 7, 6b28–36, trad. P. Pellegrin et M. Crubellier (2007, pp. 145–147): « Et tous les termes relatifs se disent par rapport à des termes qui ont avec eux une relation réciproque. Ainsi on dit que l'esclave est esclave d'un maître, et le maître maitre d'un esclave; on dit que le double est double de sa moitié, et la moitié moitié de son double; le plus grand, plus grand que ce

flexion, qui marque la différence[20]. Comme le traduit Tricot: pour ces termes, « il y a une différence de “cas” dans l’énonciation: ainsi nous appelons connaissance la connaissance *du* connaissable, et connaissable, le connaissable *à* la connaissance; sensation, la sensation *du* sensible, et sensible, le sensible *à* la sensation » (Aristote, *Catégories*, 7, 6b33–36; Tricot, p. 46). Ainsi que le notait Pacius, cité par Tricot (p. 46, n. 2): dans le cas du connaissable et de la connaissance, la « réciprocation ne se fait pas au même cas » (« *reciprocatio non fit in eodem casu* »).

La même théorie se retrouve dans la partie du chapitre 10 (*Sur les opposés*) consacrée à l’opposition des relatifs.

> Les termes qui sont opposés comme des relatifs sont ceux dont tout l’être consiste à être dit de leur opposé ou qui s’y rapporte de quelque autre façon[21]. Par exemple, le double est ce qui, dans son essence même, est dit double d’une autre chose, car c’est *de* quelque chose qu’il est dit double. La connaissance et le connaissable sont aussi opposés comme des relatifs: la connaissance est dite, dans son essence même, connaissance *du* connaissable, et le connaissable, à son tour, est lui-même, dans son essence, dit de son opposé, savoir la connaissance, car le connaissable est dit connaissable *pour* quelque chose, c’est-à-dire *pour* la connaissance. Les termes qui sont opposés comme des relatifs sont donc ceux dont l’autre consiste à être dit d’autres choses, ou qui sont, d’une façon quelconque, en relation réciproque. (*Catégories*, 10, 11b23–33; Tricot p. 67).

Le direct et l’oblique relevant de la terminologie des « cas », on peut imaginer que la remarque d’Aristote, partie intégrante de sa réflexion sur les *relatifs*, a joué un certain rôle pour l’introduction de la distinction des deux modes *rectus* et *obliquus* dans l’analyse de la *relation* intentionnelle chez Brentano. C’est dans l’évaluation de la nature et de la portée de cette différence casuelle que l’auteur de la *Psychologie vom empirischen Standpunkt* a, en partie, entamé et poursuivi son évolution vers une théorie adverbiale du jugement dans l’horizon ouvert (et ontologiquement dégagé) par le réisme.

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Considérons, en effet, la *Deskriptive Psychologie*. Dans un passage célèbre, Brentano s’appuie sur Aristote pour étayer une des ses thèses centrales: la non-réalité du corrélat objectif de la relation intentionnelle. L’autorité d’Aristote n’est autre qu’un texte de *Métaphysique*, V, 15, 1012a26 *sq*., auquel il avait déjà fait appel plusieurs fois dans PES, par exemple dans l’analyse du sentiment, quand il expliquait que si le sentiment concomitant à un acte d’audition était « un second acte psychique, accompagné lui-même de conscience », l’acte d’audition « serait représenté deux fois ». Considérons de plus près ce texte fondateur.

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qui est plus petit, et le plus petit plus petit que ce qui est plus grand; et de même pour les autres, si ce n’est que dans l’expression, la forme grammaticale sera parfois différente. Par exemple, la connaissance est connaissance de l’objet connaissable, et l’objet connaissable est connaissable par une connaissance; la perception est perception de l’objet perceptible, et l’objet perceptible est perceptible par une perception. ».

[20] Comme le notent les traducteurs, 228, n. 6, qui expliquent que « cette différence » entre types de relations « correspond en grec ancien à une variation du cas: la première relation s’exprim[ant] par un génitif, la seconde par un datif-instrumental ».

[21] Tricot (p. 67, n. 5) précise: « C’est-à-dire que la relation est marquée soit par le génitif, soit par un autre cas ».

Aristote commence par distinguer les choses qui sont dites « relatives », parce que « tout leur être est proprement dans leur relation à une autre chose », et celles qui, comme le connaissable ou le pensable, sont dites « relatives » en ce sens que d'autres choses sont relatives à elles—une distinction que nous avons vu émerger dans le chapitre VII des *Catégories*. Sur cette base, il pose:

1. que s'il est vrai que « le pensable signifie que la pensée est relative à lui », la pensée, elle, « n'est pas relative à ce dont elle est pensée, car ce serait répéter deux fois la même chose ».
2. et que, « de même, la vue est vue d'un objet déterminé, et non vue de ce dont elle est la vue (même si, en un sens, il est également vrai de le dire) », ce qui signifie qu'elle « est relative à la couleur ou à quelque autre chose de ce genre »;
3. puisque, autrement, « on répéterait deux fois la même chose, à savoir que la vue est la vue de ce dont elle est la vue ».

Dans l'article de la *Stanford Encyclopedy* sur les *Medieval Theories of Relations*, Jeffrey Brower explique que « in *Metaphysics* V, [Aristotle] suggests that there are some relational situations in which substances are related, not by a pair of accidents, but by a single accident belonging to just one of them ». Pour illustrer ce type de relations, que, se référant au paradigme des *Catégories*, il appelle « non-paradigmatic relational situations », J. Brower déclare que « Here [Aristotle] cites the example of intentional relations: *if Simmias is thinking about Socrates, this is to be explained in terms of nothing but Simmias, Socrates, and an accident of Simmias.* » La remarque est stimulante. Elle n'a qu'un défaut. Le passage en question est introuvable. Brower brode sur la phrase « le mesurable, le connaissable, le pensable sont dits relatifs, en ce sens qu'une autre chose est relative à eux » en y injectant Socrate et le malheureux Simmias, arraché à son *Théétète* natal:

> … in the *Metaphysics* [Aristotle] claims that there are relational situations (such as Simmias's thinking about Socrates) in which substances are related not in virtue of a *pair* of accidents, but rather in virtue of a *single* accident possessed by just one of the substances. "An object of thought [e.g., Socrates]" he says at one point "is said to be related because something else [e.g., Simmias] is related to it". And his point just appears to be that some relational situations are grounded in a single property or accident of a single *relatum*.

En fait, tout se passe comme si Brower *attribuait* à Aristote une analyse brentanienne de ce qui arrive quand quelqu'un, en l'occurrence, ici, Simmias, pense que Simmias, autrement dit lui-même, est plus grand que Socrate—Simmias et Socrate intervenant maintes fois sous la plume de l'auteur de *PES*. Mais précisément, en raison même de cette singulière torsion, la remarque de Brower est intéressante pour comprendre ce que vise Brentano en se référant à Aristote: cela même que Brower lit en *Métaphysique* V. Dans certains cas, *a*R*b* tient seulement par un accident de *a*. C'est à peu de choses près l'idée brentanienne du *Relativliches*, autrement dit de la conscience comme « quasi relationnelle » ou, plutôt, « quasi-relatif ». On reviendra en quelques mots sur ce point, essentiel pour le débat opposant Sauer aux tenants de la « thèse ontologique » de Chisholm.

En attendant, il faut noter que la position adoptée dans la *Deskriptive Psychologie* a un pendant scolastique remarquable en l'espèce de la théorie thomasienne des relations. De fait, au-delà d'Aristote, c'est à Thomas d'Aquin que l'interprétation

brentanienne de l'acte psychique sous la forme *a*R*b*, avec *a* (l'acte) interprété comme réel, et *b* (l'objet) comme non réel, fait penser.

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Thomas d'Aquin a développé une riche théorie de la relation, distinguant « relations réelles » et « relations de raison ». Un de ses exposés canoniques, *I^a Pars*, q. 13 a. 7, d'ailleurs évoqué par Brower, a la forme d'une combinatoire fondée sur la distinction entre deux types de choses susceptibles d'entrer dans une relation—étant entendu que toute relation requiert deux termes ou *relata*—à savoir: les choses de la nature, *res naturae*, et les choses ou êtres de raison, *res rationis*[22]. Trois cas donc, *R1–3*, qui importent à l'historien de Brentano pourvu que, comme je le fais ici, il assimile heuristiquement *res rationis* et *nicht reales*:

	relatum 1 = *a*	relatum 2 = *b*
Relatio 1 = R1	res rationis	res rationis
Relatio 2 = R2	res naturae	res naturae
Relatio 3 = R3	res naturae	res rationis

Dans *R1* et *R2*, les deux extrêmes sont de nature identique: dans *R1*, tous deux non réels, dans *R*2, tous deux réels.

Dans *R1*, où *a* et *b* sont non réels, on a la relation de raison pure et simple, elle-même non réelle.

> Parfois, il y a un être de raison des deux côtés, quand l'ordre ou le rapport entre les deux termes ne peut être qu'en fonction d'une conception de la raison, par exemple lorsque nous disons que le même est identique au même. Car, en tant que la raison appréhende deux fois un être unique, elle le pose comme s'il était deux; c'est ainsi qu'elle appréhende en lui une relation avec lui-même. Il en va pareillement de toutes les relations entre l'étant et le non-étant; elles sont l'œuvre de la raison qui conçoit le non-étant comme terme d'une relation. De même encore toutes les relations qui dépendent d'un acte de la raison, comme entre le genre et l'espèce, etc.
>
> Quandoque […] ex utraque parte est res rationis tantum, quando scilicet ordo vel habitudo non potest esse inter aliqua, nisi secundum apprehensionem rationis tantum, utpote cum dicimus idem eidem idem. Nam secundum quod ratio apprehendit bis aliquod unum, statuit illud ut duo; et sic apprehendit quandam habitudinem ipsius ad seipsum. Et similiter est de omnibus relationibus quae sunt inter ens et non ens; quas format ratio, inquantum apprehendit non ens ut quoddam extremum. Et idem est de omnibus relationibus quae consequuntur actum rationis, ut genus et species, et huiusmodi.

Avec *R1*, on a moins affaire à *a*R*b* qu'à *a*R*a*. Et même à *a* = *a*. Le rapport entre *relata* ne *peut être* que « de raison », car il n'y va pas de deux choses réellement distinctes, mais de la même prise deux fois. C'est la relation d'identité, en tant que comme le dit ailleurs Thomas, « n'introduisant aucune diversité dans la substance »,

[22] La distinction entre relation réelle et relation de raison est fondamentale en théologie. Cf.Thomas d'Aquin, *Super Sent*., lib. 1, d. 5, q. 1, a. 1, ad 1m: « … opposita relative aliquando requirunt diversitatem vel distinctionem realem; et talia sunt quae divinas personas distinguunt: aliquando autem distinctionem rationis tantum; ut cum dicitur idem eidem idem. ».

« elle ne peut consister qu'en un certain ordre saisi par la raison *entre une chose et elle-même*, prise sous *deux* de ses aspects » (*I^a Pars*, q. 28, a. 1, *ad 2m*).

Dans *R2*, les deux extrêmes de *a*R*b* sont réels, et le rapport qui les lie est réel—c'est le cas du rapport quantitatif, ou de ce qui a trait à l'action et à la passion, par exemple à la relation de motion entre le moteur et le mobile ou de génération entre le père et le fils.

> Certaines relations sont des réalités de nature quant à leurs deux extrêmes: par exemple quand il y a un rapport entre deux termes en vertu de quelque chose qui appartient réellement à l'un et à l'autre. Il en va clairement ainsi de toutes les relations qui dépendent de la quantité, comme entre grand et petit, double et moitié, etc., car la quantité est dans l'un et l'autre des extrêmes. Il en est de même pour les relations résultant de l'action et de la passion comme entre moteur et mobile, père et fils, etc.
> Quaedam vero relationes sunt, quantum ad utrumque extremum, res naturae, quando scilicet est habitudo inter aliqua duo secundum aliquid realiter conveniens utrique. Sicut patet de omnibus relationibus quae consequuntur quantitatem, ut magnum et parvum, duplum et dimidium, et huiusmodi, nam quantitas est in utroque extremorum. Et simile est de relationibus quae consequuntur actionem et passionem, ut motivum et mobile, pater et filius, et similia.

Dans *R3*, les deux extrêmes sont de nature différente: *a* est un *ens reale*, et *b* un *ens rationis*. C'est le cas quand « les deux extrêmes n'appartiennent pas au même domaine », au même « ordre ». C'est le cas du rapport entre la science et le connaissable, ou celui du sens et du sensible. Cette fois, il faut distinguer *a*R*b* et *b*R*a*, car la relation R est une chose de la nature *dans* le premier extrême, et elle est un être de raison *dans* le second: « quandoque vero relatio in uno extremorum est res naturae, et in altero est res rationis tantum ».

*a*R*b*: la science et le sens, pris en eux-même, se rapportent en tant que tels au connaissable et au sensible (toute science est science *de*, toute sensation est sensation *de*). Mais le connaissable et le sensible appartiennent au domaine des choses réelles, des *res naturae*, ils existent réellement. En tant qu'ils existent réellement, *ils sont extérieurs à l'ordre de l'intelligible et du sensible*. Dans la science et la sensation il y a donc une relation réelle en tant que *a*, le connaissant/sentant, est ordonné à connaître *b*, le connaissable/sensible: ainsi *a*R*b* est une relation réelle.

> Et hoc contingit quandocumque duo extrema non sunt unius ordinis. Sicut sensus et scientia referuntur ad sensibile et scibile, quae quidem, inquantum sunt res quaedam in esse naturali existentes, sunt extra ordinem esse sensibilis et intelligibilis, et ideo in scientia quidem et sensu est relatio realis, secundum quod ordinantur ad sciendum vel sentiendum res.

*b*R*a*: *b*, en revanche, en tant que tel, ne se rapporte pas à *a; prises en elles-mêmes*, en tant que choses de la nature, réalités physiques (qui existent indépendamment du fait qu'elles sont connues ou pas, perçues ou pas), les *choses* qui sont connaissables et sensibles sont extérieures au domaine de la cognition (elles ne dépendent pas d'elle pour être). Dans le connaissable et le sensible il n'y a donc pas de relation réelle à la science et au sens, mais une simple relation de raison, en tant que l'intellect les perçoit comme les termes des relations internes à la science et au sens: *b*R*a* n'est donc pas une relation réelle.

> … sed res ipsae in se consideratae, sunt extra ordinem huiusmodi. Unde in eis non est aliqua relatio realiter ad scientiam et sensum; sed secundum rationem tantum, inquantum intellectus apprehendit ea ut terminos relationum scientiae et sensus.

La relation *R3* est donc réelle en *a*, et non réelle en *b*, c'est-à-dire qu'elle se compose de *deux propriétés monadiques différentes*, l'une réelle, l'autre de raison, chacune interne à son *relatum* respectif. Ou plutôt: l'une interne à *a*, et l'autre… interne à rien (en tout cas pas à *b*)—puisque c'est l'intellect qui appréhende les choses connaissables et sensibles *comme* connaissables et sensibles.

Pour mieux saisir la spécificité de *R3*, Thomas renvoie lui-même, comme Brentano le fera, au texte de *Métaphysique* V, dont il extrait la formule caractérisant les *relata* dans ce type de relation: dans *R3*, les termes *'b'* « ne sont pas dit "relativement" parce qu'ils se rapporteraient à d'autres [aux '*a*'], mais parce que d'autres [les '*a*'] se rapportent à eux ».

Outre, ce qu'on peut bien appeler la *relation intentionnelle, R3* peut être illustrée par l'exemple d'une colonne, qui est dite « à droite », parce qu'il y a un « animal » (autrement dit un « vivant *doué de sensation* »), à la droite duquel elle est et est perçue à l'instant *t*. Dans '*b* est à droite de *a*', 'être à droite' n'est pas « réellement » dans *b* (ce n'est pas une propriété *interne* de la colonne), mais bel et bien et seulement dans *a* (pour qui la colonne « est à *sa* droite »).

> Unde philosophus dicit, in V Metaphys., quod non dicuntur relative eo quod ipsa referantur ad alia, sed quia alia referuntur ad ipsa. Et similiter dextrum non dicitur de columna, nisi inquantum ponitur animali ad dextram, unde huiusmodi relatio non est realiter in columna, sed in animali.

L'exemple de la colonne est adapté du *De Trinitate*, 5, de Boèce, où il est question de deux personnes: selon Boèce, qui étend à toute relation (au sens aristotélicien de πρός τι) le diagnostic que Thomas réserve à *R3*, la prédication relative ne change rien (n'ajoute rien, ne retire rien) à la chose dont elle est prédiquée—*a fortiori* quand les prédicats relatifs à une seule et même chose varient en fonction des changements réels subis dans une autre. A peu de chose près, c'est la définition d'un *Changement cambridgien*: si je m'approche d'un ami par la gauche, il sera à (ma) droite; si je viens par la droite, il sera à (ma) gauche. Au bout du compte, j'aurai fait quelque chose, mais il ne lui sera rien arrivé (Cf. Boèce, *De Trinitate*, cap. 5, Stewart-Rand, 26–27. Pour plus de détails, cf. de Libera 2011).

C'est le même type de situation que décrit le *De Trinitate* d'Augustin quand exposant la distinction entre les accidents relatifs « qui adviennent avec un changement dans leur sujet » et ceux qui se produisent sans présupposer ou impliquer un tel changement, il oppose l'amitié et l'appréciation d'un bien, en montrant: 1º qu'un individu *a* ne peut commencer d'être et d'être dit *am*i [de *b*], sans commencer d'aimer *b* (ami et aimer allant de pair ontologiquement et linguistiquement); tandis que 2º une pièce de monnaie *b* ne subit aucun changement quand elle devient et est dite 'prix de *a*'[23].

[23] Voir *La Quête*…, 387–393. Dans cette épistémé, le *champion toutes catégories* du changement cambridgien est évidemment Dieu, pour lequel l'ensemble du dispositif théorique est mis en place. C'est le cas, clairement, dans le texte époqual d'Augustin *De Trinitate*, V, XVI, 17, BA 15, 464–467, analysé par Rosier-Catach (2004, pp. 105–112).

Bref, avec *R3*, on dispose d'un type de relation où une chose devient ou cesse d'être connue en vertu des états intentionnels d'un connaissant—une relation telle que:

*a*R^3*b*: *a*, le connaissant, a une relation réelle à *b*, le connaissable, *&* le sensible *b* a une relation de raison à *a & b* acquiert une relation à *a* du fait d'un changement dans les propriétés de *a.*

C'est cette relation qui caractérise la relation intentionnelle dans la *Deskriptive Psychologie*.

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L'acte de penser est donc caractérisé par une double relation. Mais aussi par une double asymétrie: l'asymétrie ontologique de l'acte, qui est réel, et de l'objet immanent, qui ne l'est pas; l'asymétrie entre ce qui arrive au pensant quand il pense, à savoir: quelque chose, un changement réel, et ce qui arrive au pensé quand il est pensé: à savoir rien, puisque, en toute rigueur, dire que *'b est pensé'* est un énoncé qui, dans les termes de *Métaphysique* V, renvoie à *a* en tant qu'il pense *'b'*, plutôt qu'à *b.* En disant que *'b est pensé'* on dit cependant bien quelque chose—à savoir qu'il y a un événement, que cet événement est un événement de penser, et non pas, par exemple, de vouloir, ou de désirer, et qu'il a pour parties « distinctionnelles » *a* et *b*—et non pas *a* et *a* ou *a* et *c*. Le statut de cet événement est entièrement conçu du côté de *a* : c'est un *geistiges Inhaben (mental holding)*, où ce qui *a* mentalement est réel, et ce qui *est eu* mentalement ne l'est pas.

Dans un texte du *Nachlaß*, consigné sous la rubrique PS 86, commencé le 4 et achevé le 7 septembre 1901, traduit sous le titre *Psychognostic Sketch* (DP [146], p. 155), Brentano donne une série de synonymes inscrivant cet « avoir » dans une série commençant à Descartes, et insiste sur le fait que *la relation psychique par excellence* est celle du *Gegenständlichhaben* et du *Gegenständlichsein*, entendus comme les deux pôles de l'activité psychique.

On dira: la relation *de* l'âme, plutôt que la relation *psychique*, une relation où l'un des termes est un avoir (– *haben*), et l'autre un être (– *sein*), et où pourtant le terme qui est dit « être », à savoir: l'objet, est dit ailleurs « irréel, immanent, inexistant » et même, ici ou là, non-existant: telle est bien, si l'on ose dire, la *relation d'un seul*, et non la *relation de deux*.

L'évolution de Brentano se fait suivant une ligne précise: l'analyse de cette relation *de* l'âme. On connaît la fin de l'histoire: il abandonne la théorie de l'inexistence intentionnelle pour cause de réisme. Je pense qu'il vaudrait mieux dire qu'il modifie sa théorie de la relation de l'âme dans un sens inclinant au réisme, puis en faisant partie intégrante, mais que ses modifications étaient appelés par les caractéristiques mêmes de ses premières théories sur l'inexistence intentionnelle, et qu'elles ont revêtu la forme d'une marche progressive, constante et raisonnée vers l'adverbialisme. Selon ma lecture, le réisme de Brentano survient sur l'adverbialisme. Les deux théories ne s'impliquent pas *a priori*. Elles sont intriquées *chez* lui. C'est une caractéristique de sa pensée.

L'intrication du réisme et de l'adverbialisme est évidente, quand on regarde certains résumés de la « crise de l'immanence ».

> Brentano was later to reject [his] doctrine of intentional inexistence, or mental holding (*geistiges Inhaben*). According to his final view, the statement 'There is something which is being thought (*ein Gedachtes*)' is an improper formulation of 'There is a thinking-thing (*ein Denkendes*)'; statements ostensibly about immanent objects are actually statements only about the thinker who may be said to have those objects. According to this final view, there are no insubstantial entities; everything is an *ens reale* (Cf. Muller « Introduction » à Brentano 1982, p. xx).

Naturellement, la thèse selon laquelle il n'y a d'*ens* que réel, implique un fantastique coup de rasoir éliminant tout ce qui relève de *l'innerlich Gegenständliches,* de l'*Inwohnendes,* et du *geistiges Inhaben*. Mais l'adverbialisme est un moyen tout aussi puissant de faire l'économie des objets intentionnels, et de leurs métastases meinongiennes. A partir de là, mon raisonnement est simple: la conversion au réisme est tardive; la montée vers l'adverbialisme est ancienne et continue. J'appelle « montée vers l'adverbialisme », l'évolution des idées brentaniennes au sujet des « porteurs de vérité », qui tend à faire des actes de jugement (dans la phase pré-« réiste »), puis du jugeant lui-même (dans la phase « réiste »)[24], le *truthbearer*. Brentano a adopté le réisme contre certains (beaucoup) de ses « élèves » ; il a développé la théorie adverbiale organiquement, à partir de ses premières intuitions: la montée vers *der Urteilende*, avec, pour parler en médiéviste, la substitution progressive du *verax* au *verum* qui l'accompagne, est pour moi le trait initial, et l'élan qui ne faiblit pas. Que les deux théories, le réisme et l'adverbialisme, se soient rejointes, et de manière cohérente est une chose. L'ancienneté de la tendance à l'adverbialisme en est une autre. Dans tous les cas, *il y a une continuité véritable dans la pensée de Brentano*.

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Le Brentano réiste défend une théorie non propositionnelle du jugement, liée au rejet des propositions, des états de chose et des contenus de jugement et à la position de *qui-juge*, le juge ou "le jugeant" (*der Urteilende*), comme porteur de la vérité (vériporteur, *truthbearer*). R. Chisholm décrit cette théorie sur la base de deux théorèmes fondamentaux: 1. il y a deux types de jugements, affirmatif et négatif; 2. les seuls termes requis pour formuler de tels jugements sont des termes dits « authentiques », à savoir des termes qui, s'ils réfèrent (référaient) à quelque chose

[24] Je souscris ici entièrement aux formules d'A. Rojszczak (2005, Chap. VI (*Reism*), pp. 105–106): « According to the descriptive-psychological investigations of the judging activity, as well as on the grounds of their linguistic counterparts, the entity which served as the bearer of truth for Brentano was the act of judging. Given Brentano's reistic ontology of mind, however, there are no judging acts, only judging persons. In the reistic view, therefore, the bearer of truth is someone who judges, i.e. the judger [*der Urteilende*], and the judger can judge *truly* and *falsely*. Thus, in the proper sense, the word 'true' should be predicated of a judger. Therefore, we have to deal with the truly and falsely judging person and not with true or false judgments. Since in Brentano's view mental phenomena possess an active character, it is not surprising that truth-predicates are adverbs in this respect. The bearer of truth is, thus, a subject S who in the act of consciousness asserts or rejects an object of presenting. » Pour moi, le dernier Brentano a, en quelque sorte, à la fois sécularisé et universalisé (en l'appliquant à tout « jugeant ») une théorie médiévale dont la sœur jumelle serait – du point de vue du « vérifacteur » (*truthmaker*) –, la théorie que j'ai décrite sous les titres d'« Argument du Penseur » (ou « du Juge ») et d'« Anti-Frege », soutenue au XIV^e^ siècle par Grégoire de Rimini. Sur ce point, je me permets de renvoyer à de Libera (2002).

réfèrent (référraient) à des *entia realia*. Par « terme authentique » on entend donc tout terme correspondant à ce que stipule la formule suivante, qui en distingue les diverses classes:

> If *T* is a genuine term, then: (i) *non-T* is a genuine term; (ii) *T-acceptor, T-rejector, correct-T-acceptor*, and *correct-T-rejector* are genuine terms; (iii) *part-of-T* is a genuine term; and (iv) if *R* is a genuine term, the following are genuine terms: (a) *T-which-is-R*, (b) *T-and-R*, and (c) *T-or-R*.

Pour ce qui nous occupe, l'originalité la plus évidente de la théorie non propositionnelle du jugement est l'introduction de *T-acceptors* et de *T-rejectors* (et *a fortiori* de *correct-T-acceptors*, et de *correct-T-rejectors*—étant entendu que s'il y a des *T*, tous les *T-acceptors* sont des *correct-T-acceptors*). Comme l'explique Chisholm:

> The term "acceptor" will be used to refer to a person who makes a positive judgment and the term "rejector" […] to refer to a person who makes a negative judgment. Since "horse" is a term, "horse-acceptor" will refer to a person who makes a positive judgment with respect to horses. Such a person would be described in our ordinary propositional locution by saying he "believes that there are horses", but in Brentano's terms he would be one who "accepts horses", or more simply a "horse-acceptor". The term "horse-rejector", analogously, would refer to one who makes a negative judgment with respect to horses. We would describe such a person in our ordinary propositional locution as one who believes that there are no horses. (Chisholm 1976, p. 91).

Ce sont les premiers ingrédients de ce que nous appelons « théorie adverbiale » du jugement, mais d'autres ingrédients, tout aussi nécessaires, sont la distinction entre mode direct et mode latéral, et le recours à la notion de détermination extrinsèque. La *denominatio extrinseca* concentre maintes questions soulevées par la situation de Brentano dans la tradition ou le sens et la portée de sa propre évolution. Un argument en faveur de cette thèse est d'ordre archéologique: la place occupée dans l'histoire de la philosophie par la thèse de Thomas Reid sur la perception (notée ici *TP), articulant action immanente et dénomination extérieure. On peut la résumer ainsi:

> *TP Quand nous percevons, ni les objets n'agissent sur l'esprit [*TP1] ni l'esprit n'agit sur les objets [*TP2] [25].

La thèse de Reid (*TP1) affirmant que l'être-perçu « n'implique ni une action ni une qualité dans l'objet perçu » avait été largement esquissée dans la première objection de Caterus à la preuve cartésienne de l'existence divine, fondée, comme on le sait, dans la IIIe *Méditation*, sur la réalité objective de l'idée de Dieu (Voir, sur ce point, de Libera 2008, pp. 310–323). Comme l'a montré D. Moran, on peut jusqu'à un certain point dire que « Brentano fait revivre le débat Descartes-Caterus »: qu'il le « rejoue » (en faisant revivre le débat entre l'interprétation thomiste et l'interprétation

[25] Cf. Reid (1785, Chap. xiv, p. 204): « When we say that one being acts upon another, we mean that some power or force is exerted by the agent which produces, or has a tendency to produce, a change in the thing acted upon. If this be the meaning of the phrase, as I conceive it is, there appears no reason for asserting that, in perception, either the object acts upon the mind or the mind upon the object. ».

scotiste de la « réalité objective »)[26]. Selon lui, le concept d'objectivité immanente chez le premier Brentano s'accorde pleinement avec la position cartésienne et scotiste: « The early Brentano's concept of immanent objectivity agrees closely with the Cartesian or Scotist view », tandis que sa thèse ultérieure correspond à celle de « Caterus, le thomiste », « pour qui les pensées n'ont pas de statut ontologique » (« His later position mirrors that of Caterus the Thomist, who held that thoughts have no ontological status at all »).

Je partage cette interprétation, mais je n'en tire pas le même diagnostic. Selon Moran, Brentano « n'est pas allé plus loin que les concepts ni même que le langage » des protagonistes « de cette dispute » de l'Âge classique: « the point is: Brentano did not progress beyond the concepts or even the language of this seventeenth-century dispute ». Moran souscrit globalement au diagnostic de Ryle pour qui « Brentano offered merely a psychologist's amendment to the "way of ideas" » (Ryle 1972, p. 10): il combine quelques reformulations linguistiques neuves, « adverbiales », permettant d'évacuer certaines « entités métaphysiques inutiles », et « une version réiste » de la thèse *aristotélicienne* « plus classique », « faisant des pensées des états accidentels d'une substance, le penseur »[27]. Je trouve ce verdict sévère. Je préfère soutenir que le dernier Brentano s'inscrit dans une tradition qui *a parte ante* va d'Ockham à Reid[28], et *a parte post*, mène au Changement Cambridgien: une tradition articulée, notamment, sur *TP1.

[26] Cf. Moran (1996, p. 8): « Frequently Brentano refers to Descartes' distinction between objective and formal reality in explanation of the status of the intentional object. In fact Brentano is replaying a debate which took place between Descartes and his Thomist critic, Fr. Caterus, a debate between the Scotistic and Thomistic interpretations of *realitas objectiva*. Indeed, the terminological similarities between Brentano and Descartes strikingly demonstrates Brentano's debt to what I call the Scholastico-Cartesian tradition. ».

[27] Moran (1996, p. 9): « Speaking of mental entities as existing in themselves, for the later Brentano, is merely a convenient linguistic fiction […] akin to the manner in which mathematicians effortlessly talk about different kinds of number, e.g., negative or imaginary numbers […] without any ontological commitment. Brentano in fact combines certain linguistic redescriptions which dissolve the embarrassing ontological superfluities, with a reist version of a more classical Aristotelian account where thoughts are accidental states of a substance, the thinker. Brentano's linguistic settlement of the ontological issue, what we might call his 'adverbial view', is not without its own daunting problems, however. ».

[28] Le rapport Brentano-Reid est, on l'a dit, peu étudié. Les meilleures contributions ont trait à la conscience. C'est, par exemple, sous leur double patronage qu'un Keith Hossack place ce qu'il appelle la « thèse de l'identité ». La thèse de l'identité (Identity Thesis) a, selon lui, été introduite par Reid pour la sensation, puis généralisée par Brentano à tous les états de conscience. Cf. Hossack (2002, spéc. 163): « The Identity Thesis, proposed by Reid for the case of sensations, and extended by Brentano to conscious states generally, says that a state is conscious iff it is identical with introspective knowledge of its own instantiation ». En d'autres mots, selon l'Identity Thesis: « … one's introspective self-knowledge of a mental state is consciousness of that state, which is simply being in the state. » Bref: « … according to Reid, the pain is identical with feeling the pain, which is identical with being conscious of the pain, which is identical with knowing of the pain, which is knowledge. » La généralisation brentanienne de la thèse de Reid consiste à soutenir « that any conscious state is identical with knowledge of its own occurrence », ou (175) « that any conscious state is identical with knowledge of its own instantiation and that this is in fact the criterion of whether a state is conscious ». Sur la distinction reidienne entre sensation et perception,

Dans son *Commentaire des Sentences*, en effet, le « Vénérable Débutant » critique ceux qui imaginent faussement que « du fait qu'une pierre est intelligée, elle acquiert pour elle-même un certain être—un être diminué » ou « atténué ». C'est, dit-il, manifestement faux. La « couleur qui est dans le mur » en face de moi « n'acquiert rien », que ce soit « diminué » ou « complet », « parce que je la vois »[29]. Même dans le cas où le « voyant » est Dieu, il en va de même. « La pierre n'acquiert aucun être, diminué ou complet, du fait que Dieu l'intellige. » La même analyse s'applique à nos désirs. Une chose future « n'acquiert rien du seul fait que je la désire »[30]. L'objet de mon désir, « n'a rien de plus, du fait qu'il est désiré par moi, que ce qu'il avait avant ». Il n'en est pas moins *dénommé* véritablement comme « désiré », de même que la blancheur, dès lors qu'il y a vision, peut véritablement être *dénommée* « vue ». De même, du fait que la créature a de l'être (qu'elle est créée), Dieu n'acquiert rien: il n'a pas lui-même un être nouveau, ni diminué ni complet—pourtant il est dit véritablement et est *créant*, alors qu'avant que la créature soit, il ne l'était pas[31].

Dans tous les cas mentionnés par Reid et Ockham, un de deux relatifs subit un changement réel, tandis que son corrélatif ne subit, si l'on peut dire, qu'un Changement Cambridgien. C'est cette asymétrie que capte la notion de *denominatio extrinseca*. Selon moi, c'est elle qui a retenu l'attention croissante de Brentano, dans la démarche qui l'a conduit du conceptualisme au réisme. C'est elle que l'on retrouve, en filigrane, derrière la notion centrale de « détermination relative » *(relative Bestimmung)*.

La notion de *denominatio extrinseca* intervient fréquemment dans l'oeuvre de Brentano, mais c'est dans la *Kategorienlehre* qu'elle est le plus massivement représentée. Et c'est aussi là qu'abordant l'identification de la dénomination extrin-

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cf. Reid ([6]1810, Chap. VI (Of Seeing), sect. xx (Of Perception in general), 361) : « The same mode of expression is used to denote sensation and perception; and, therefore, we are apt to look upon them as things of the same nature. Thus, I feel a pain; I see a tree: the first denoteth a sensation, the last a perception. The grammatical analysis of both expressions is the same: for both consist of an active verb and an object. But, if we attend to the things signified by these expressions, we shall find that, in the first, the distinction between the act and the object is not real but grammatical; in the second, the distinction is not only grammatical but real. ».

[29] Guillaume d'Ockham, *In I Sent*., *d*. 36, *q. un*., *Opera theologica* IV, 550: « Dico igitur quod omnia talia argumenta procedunt ex falsa imaginatione. Imaginantur enim quod per hoc quod lapis intelligitur, aliquod esse – quasi quoddam esse diminutum – sibi adquiritur, quod est manifeste falsum. Nam per hoc quod ego video colorem in pariete, nihil adquiritur, nec diminutum nec perfectum, ipsi colori. ».

[30] *Cf.* Guillaume d'Ockham, *In I Sent*., *d*. 36, *q. un*., 550: « Eodem modo per hoc quod Deus intelligit creaturam vel lapidem, nullum esse, nec diminutum nec perfectum, adquiritur ipsi lapidi. Similiter per hoc quod appeto aliquid futurum, illi nihil adquiritur, ita nec per hoc quod Deus intelligit lapidem. » Sur ce texte, cf. Renault (2000, p. 36).

[31] Guillaume d'Ockham, *Ibid*., 550: « Similiter desideratum, ex hoc quod desideratur a me, nihil habet quod prius non habuit. Et tamen sicut posita visione vere potest denominari per intellectum componentem ipsa albedo quod est visa, et illud futurum vere dicitur desideratum, ita exsistente cognitione divina vere lapis intelligitur, et tamen nihil reale adquiritur lapidi, nec esse diminutum nec perfectum. Sicut per hoc quod creatura habet esse, nihil Deo adquiritur, nec habet aliquod esse de novo, nec diminutum nec perfectum, et tamen vere dicitur et est Deus modo creans et prius non erat creans. ».

sèque avec l'étant par accident d'Aristote, il évoque le cas, pour nous décisif, de la pensée et du pensant.

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La question directrice est: qu'est-ce qu'une détermination relative? Comme souvent Brentano répond par un exemple: qui pense une détermination relative *in recto* se représente toujours en même temps autre chose *in obliquo*. Celui qui pense à un *voyant* pense aussi latéralement à un *coloré*, qui est vu par le voyant. Si ce qui est représenté *in recto* est une détermination relative « qui a une signification réelle pour la substance », la détermination corrélative peut sans problème être une simple dénomination extrinsèque. Pensant et pensé sont les exemples parfaits de ce type de corrélation ontologiquement asymétrique, de bons exemples, version brentanienne, de *TP1. Le pensé est le corrélat(if) du pensant. La chose pensée *ne subit aucun changement*, aucune transformation du seul fait qu'elle est pensée. Elle n'a pas même besoin d'être pour être pensée. De même, et ce serait, toutes proportions gardées, l'équivalent brentanien de *TP2, un agent *ne subit aucun changement* du seul fait qu'il agit, et de même que le pensé n'a pas besoin d'exister pour être pensé, un agent n'a pas besoin d'exister pour *continuer* de produire un effet. Ce type de corrélat(if)s est ce que la tradition entend par *denominationes extrinsecae*[32].

Installée aux confins de la paronymie aristotélicienne et de la « connotation » médiévale, la dénomination extrinsèque brentanienne, avec les distinctions qui l'accompagnent, dont celle, fondamentale, des modes *in recto* et *in obliquo*, donne à son réisme une profondeur de champ, qui oblige à s'interroger sur la réalité ou, au moins, sur l'étendue et la portée de la rupture intervenue, dit-on, lors de la « crise de l'immanence ».

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Ceci nous conduit au débat Sauer-Chisholm. L'idée de relation semble impliquer un couple de choses ordonné et un prédicat à deux places (dyadique) tombant sur chaque membre du couple, autrement dit une structure de type *a*R*b* où *a* et *b*, les membres du couple ordonné <a, b> entretiennent la relation exprimée par le prédicat dyadique[33]. Est-ce là le type de relation évoqué par la *Deskriptive Psychologie*?

[32] Brentano (1933[1], pp. 237–238) : « Vielleicht ist das ens per accidens des Aristoteles ganz mit der denominatio extrinseca zu identifizieren. Fragt man, was eine relative Bestimmung im Unterschiede von einer absoluten sei, so ist zu antworten, wer eine relative Bestimmung in recto denkt, stellt immer auch etwas in obliquo vor. So denkt einer, der einen Sehenden denkt, in obliquo auch ein Farbiges, das von diesem gesehen wird. Wenn das in recto Vorgestellte eine relative Bestimmung ist, welche für eine Substanz reale Bedeutung hat, so kann die korrelative Bestimmung eine bloße denominatio extrinseca sein. So ist z.B. das Korrelat des Denkenden das Gedachte, und an dem Ding wird dadurch, daß es gedacht wird, nichts geündert; ja es braucht nicht einmal zu sein, um gedacht zu sein. Ähnliches gilt vom Wirkenden, das dem Leidenden als Korrelat entspricht. Am Wirkenden ändert sich nichts, insofern es wirkend ist, und ein Nachwirkendes braucht selbst gar nicht zu sein, wenn es nachwirkt. So sind denn hier die Korrelate denominationes extrinsecae.»

[33] Rappelons que <a, b> est la représentation du couple ordonné de deux éléments a et b, et que l'on représente par {a, b} le couple non ordonné. La caractéristique du couple ordonné est que si <a, b> = <c, d>, alors a = c et b = d.

Non, répond Sauer. L'attribuer à Brentano, c'est non seulement lui faire violence, mais c'est aussi, et d'abord, faire l'impasse sur la dimension fondamentalement aristotélicienne de sa théorie des « états de chose relationnels ».

Tout se ramène à une question à la fois simple et difficile: de quoi Aristote parle-t-il? La réponse est claire: il parle de *relatifs*. Il parle du πρός τι, de ce qui « se *rapporte* à quelque chose » d'autre. L'allemand donne à entendre une idée de comportement orienté, que l'on retrouve dans le latin *« se habere ad »* (=se rapporter à, se comporter vis-à-vis de). Soit l'exemple d'Aristote: le fait que Simmias est plus grand que Socrate. Dans la vue courante, Simmias (=a) et Socrate (=b) sont deux *relata*, les membres d'un couple ordonné <a, b> concernés par le prédicat dyadique '… est plus grand que…', installant Simmias dans la relation *être plus grand que* Socrate[34]. Dans l'ontologie d'Aristote, ces deux *relata* sont des substances. Ce ne sont pas des relatifs comme le sont 'plus grand' et 'plus petit' ou 'maître' et 'esclave'—de fait, ces derniers sont définis par le fait que chacun a son corrélatif. Comme l'écrit Aristotre dans les *Catégories*:

> … tous les relatifs ont leurs corrélatifs: par exemple, l'esclave est dit esclave du maître, et le maître, maître de l'esclave; le double, double de la moitié, et la moitié, moitié du double; ce qui est plus grand, plus grand que son plus petit, et ce qui est plus petit, plus petit que son plus grand. Il en est de même de tous les autres relatifs. (*Catégories*, 6, b29–32, Tricot, 46)

Socrate et Simmias sont des substances, mais précisément, argue Sauer, selon Brentano, Aristote admet à titre de propriétés relationnelles des prédicats monadiques tels que '… est-plus grand que Socrate' et '… est-plus petit que Simmias', qui sont prédicables en vérité, le premier de Simmias, le second, de Socrate, ce qui veut dire qu'on a affaire là à des entités « pour qui être n'est rien d'autre que se rapporter d'une quelconque manière à autre chose » (la définition des relatifs *secundum esse* [8a32]), à savoir: à un 'plus grand-que-Socrate' qui, du point du vue du sujet, est Simmias, et à un 'plus petit-que-Simmias' qui, du point du vue du sujet, est Socrate, autrement dit à un relatif et à son corrélat, à de vrais relatifs donc, qui sont naturellement simultanés (si la moitié existe, le double existe) et s'anéantissent réciproquement (s'il n'y a pas de double, il n'y a pas de moitié; s'il n'y a pas de moitié, il n'y a pas de double [7b15–22])[35].

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[34] Sauer (2006, p. 21): « Wenn wir von relationalen Sachverhalten sprechen, so denken wir an etwas von der Form *aRb* : an ein geordnetes Paar von Dingen und ein zweistelliges Prädikat, das auf die Paarglieder zutrifft, so daß das eine zum anderen in der von dem zweistelligen Prädikat ausgedrückten Beziehung steht. Diese Sichtweise auf Brentano zu übertragen, heißt aber, den Aristotelischen Hintergrund seines Denkens über relationale Sachverhalte zu ignorieren. Aristoteles spricht vom *Relativen,* dem *pros ti* als dem zu etwas sich Verhaltenden, wie Brentano übersetzt (*Kategorienlehre*, p. 166). Nehmen wir den Sachverhalt, daß Simmias größer ist als Sokrates. Wie wir über Relationen zu denken gewohnt sind, sind Simmias und Sokrates die betreffenden Relata, d.h. die Glieder eines geordneten Paares, auf welche das zweistellige Prädikat, 'ist größer als' zutrifft, so daß Simmias in der Beziehung des Größer-Seins zu Sokrates steht. ».

[35] Sauer (2006, pp. 21–22): « Aber unsere Relata sind Aristotelischen Kategorienschema *Substanzen* und keine Relativa. Solche sind vielmehr Größeres und Kleineres, Herr und Knecht und dergleichen *(Cat.* 7, 6a38-b2 ; b29–33). D. h. Aristoteles analysiert unseren Fall so, daß von den beiden *ein*stelligen Prädikaten 'ist größer-als-Sokrates' und 'ist kleiner-als-Simmias' das erste von Simmias und das zweite von Sokrates wahr prädizierbar ist, was weiters besagt, daß hier

Il y a cependant une exception qui nous concerne au premier chef. Ce qui vaut pour les relatifs authentiques que sont le double et la moitié ou le maître et l'esclave ne vaut pas pour la relation intentionnelle, la relation de pensée: dans ce cas, en effet, seul un des membres du couple est un vrai relatif, le pensant, tandis que le second, ici, le pensable, ne l'est « que de nom », le terme *'pensable'* appliqué à *x* indiquant seulement « qu'*il y a une pensée de x* », si l'on en croit ce que dit la *Métaphysique*[36].

Ce point est fondamental. On y rejoint en effet les thèses de la *Métaphysique*, V, 15, 1021a26 *sq*., évoquées plus haut. La différence entre les deux types de relatifs est plus claire sans doute dans les *Catégories* que dans la *Métaphysique*. En 7b20 *sq*. Aristote la pose sans équivoque: dans le cas du pensable ou du connaissable, on a affaire à des relatifs qui ne sont pas naturellement simultanés, et qui ne s'anéantissent pas réciproquement:

> Cependant il n'est pas vrai, semble-t-il bien, que dans tous les cas, les relatifs soient naturellement simultanés. En effet, l'objet de la science peut sembler exister antérieurement à la science, car le plus souvent c'est d'objets préalablement existants que nous acquérons la science: il serait difficile, sinon impossible, de trouver une science qui fût contemporaine de son objet. En outre, l'anéantissement de l'objet entraînerait l'anéantissement de la science correspondante, tandis que l'anéantissement de la science n'entraîne pas l'anéantissement de son objet. En effet, l'objet de la science n'existant pas, il n'y a pas de science (car il n'y aura plus rien à connaître), mais si c'est la science qui n'existe pas, rien n'empêche que son objet existe (Tricot pp. 49–50)

Mêmes observations, même dissymétrie, dans le cas de la sensation. Bien que celle-ci soit définie comme *l'acte commun du sensible et du sentant*, le sensible est antérieur au sentant et à la sensation, tant au point de vue de l'anéantissement réciproque («si le sensible disparaît, la sensation disparaît, tandis que si c'est la sensation, le sensible ne disparaît pas, car la sensation s'exerce *sur un* corps et *dans un* corps»[37])

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zwei Entitäten vorliegen, "für die zu sein dasselbe ist wie zu etwas irgendwie sich zu verhalten" (8a32); nämlich ein Größeres-als-Sokrates, das dem Subjekt nach Simmias, und ein Kleineres-als-Simmias, das dem Subjekt nach Sokrates ist: Hier haben wir das Relative und sein Korrelat, von denen Aristoteles sagt, was dann Brentano wieder geltend machen wird, nämlich daß sie sich der Existenz und der Erkenntnis nach gegenseitig involvieren (7b 15–22; 8a35-b 15). ».

[36] Sauer (2006, p. 22): « Bei der Koexistenzbedingung kannte Aristoteles freilich eine Ausnahme, eben die Denkbeziehung (7b22–8a12), bei der nach *Met* Δ. *15* nur das eine Glied des Korrelatenpaares, das Denkende, ein genuines Relatives, das zweite hingegen mehr nur dem Namen nach ein solches ist, "denn das Denkbare *(dianoêton)* bezeichnet, daß es ein Denken von ihm gibt" (1021a31). ».

[37] *Catégories* (7, 7b35–38, 50). Tricot (*ibid*., n. 3) glose: « "Sur un corps" objet de sensation; "dans un corps" sentant. » La sensation peut bien disparaître *dans le corps* sentant, le corps sensible, *sur lequel* elle portait, n'en demeure pas moins. Second argument sur le même thème, *Catégories* (7, 7b38–8a5, 50–51): « D'autre part, le sensible une fois détruit, le corps est détruit aussi (car le corps fait partie des sensibles), et si le corps n'existe pas, la sensation aussi disparait. Aussi la destruction du sensible entraîne-t-elle celle de la sensation. Par contre, la destruction de la sensation n'entraîne pas celle du sensible: l'animal anéanti, la sensation est anéantie, tandis que le sensible subsistera; ce sera par exemple le corps, la chaleur, le doux, l'amer, et toutes les autres choses qui sont sensibles. ».

qu'à celui de la simultanéité naturelle[38]. En somme, le connaissable et le sensible sont des relatifs *secundum dici*, car ils sont antérieurs à la science et à la sensation, leur disparition entraînant respectivement celle de la science ou de la sensation corrélative, mais pas réciproquement.

Résumons. Selon Sauer, dans le texte de la *Deskriptive Psychologie* daté des années 1890/1891, Brentano analyse les «états de chose relationnels » en deux relations : l'une entre deux *relata*, en l'occurrence deux substances, et deux *correlata*, existant seulement « dans un sens modifié ». Dans ce cadre, la relation intentionnelle joue entre deux substances, un « sujet » et un « objet », mais aussi entre deux corrélatifs, tous deux existants, dont l'un est l'acte de conscience, et l'autre « une partie inséparable de cet acte », le « vu », le « représenté », bref « *das, worauf er [der Bewußtseinakt] gerichtet ist* ». Ce *worauf* est le corrélatif de l'acte de conscience: ce n'est pas l'objet lui-même. Le corrélatif existe nécessairement. L'objet, non. Le centaure, la licorne en sont la preuve.

Les tenants de la « Kraus-Chisholm Deutung » confondent corrélatifs et *relata*: « Es ist […] leicht, das *hinter der ontologischen Deutung der Intentionalitätsthese* beim vorreistischen Brentano stehende *Mißverständnis* herauszustellen: *Es ist einfach die Verwechslung der Korrelate mit den Relata* » (Sauer 2006, p. 23) [39]. La racine de cette erreur est qu'ils ne tiennent pas compte de la dimension authentiquement aristotélicienne de la théorie brentanienne de la relation intentionnelle. Suivant *Métaphysique*, V, 15, 1021a26 *sq*., le Brentano de Sauer fait éclater l'analyse ontologique de la forme *a*R*b* en deux paires de corrélatifs: *a(*R*b)* et *b(*R**a)* ou R* est la converse de R et *(*R*b)* et *(*R**a)*, les « formes de détermination monadique » de *a* et *b*. Ce schéma, cependant, et c'est là le point décisif, ne s'applique pas à la « relation de pensée », il ne vaut pas pour la relation *noétique.* De fait, si l'on représente le pensant par *a(*R*b)* et le pensé par *b(*R**a)*, on voit que, si l'on admettait le parallélisme, le prédicat représenté par *(*R**a)*, à savoir: 'est-pensé-par-*a*' concernerait *b*, et exigerait dans tous les cas son existence. L'originalité de la relation noétique chez Aristote, ce qui fait sa singularité, son caractère exceptionnel, c'est que la forme du pensé n'est pas *b(*R**a)*, mais bien plutôt *(b*R**)a*, où le prédicat est '*b*-est-pensé-par', et concerne donc *a :* '*b*-est-pensé-par' ne se distinguant de *'pense-b'* que par la transformation passive. En somme, si *(b*R**)a* est la forme authentique du pensé, cela veut dire, et rend immédiatement lisible, que *a(*R*b)* n'implique pas l'existence de *b*[40]. Comme le souligne Sauer, *(b*R**)* n'est qu'un *ens linguae*, un « être de langage », un être linguistique[41]. On peut sur cette base revenir sur la question de l'évolution de Brentano, et conclure.

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[38] *Catégories* (7, 8a5–12, 51): « Autre preuve: la sensation est engendrée en même temps que le [sujet] sentant, car la sensation naît avec l'animal; mais le sensible existe certes avant l'animal ou la sensation, car le feu et l'eau, et autres éléments de cette nature, à partir desquels l'animal est lui-même constitué, existent aussi avant qu'il n'y ait absolument ni animal, ni sensation. Par suite, on peut penser que le sensible est antérieur à la sensation. ».

[39] L'ensemble du dossier est repris sous un angle neuf dans L. Cesalli & H. Taïeb (à paraître).

[40] Sauer (2006, p. 22, n. 17): « Anders gesagt: Die Form *(bR*)a* des Gedachten drückt aus, daß *a(Rb),* wenn das Denkende repräsentierend, nicht die Existenz von *b* impliziert. ».

[41] Sauer (2006, pp. 22–23): « In dieser Sicht des relationalen Sachverhalts zerlegt also die ontologische Analyse der Form *a*R*b* diese für einen Fall wie den, daß Simmias größer ist als Sokrates,

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Le Brentano réiste et le Brentano pré-réiste rejettent tous deux la thèse selon laquelle toute relation exige l'existence de deux *relata*. La singularité du Brentano de la dernière période est de poser que le *second corrélatif* de la « relation de pensée », « la partie inséparable de l'acte de conscience », le *Worauf*, n'est qu'une fiction résultant d'un usage figuré du langage, pour ne pas dire d'un abus de langage: un *ens linguae*.

Cette nouvelle intervention d'une expression latine, pour le moins rare, montre à quel point Brentano se plait à reprendre certains concepts de la Scolastique tardive. L'expression *'ens linguae'* n'est pas médiévale. Elle ne figure pas chez Thomas, ni chez aucun des grands scolastiques qui me sont accessibles. Pour autant que je puisse en juger, c'est une expression tardive, que l'on rencontre chez des auteurs comme le très anticartésien Juan Caramuel y Lobkowitz[42], un des pères de l'ontologie moderne (et l'un des tout premiers introducteurs du mot lui-même, cinq ans avant Clauberg) ou son adversaire Giuseppe Polizzi. La formule '*ens linguae*' revient fréquemment chez Caramuel, d'abord, à un niveau général, dans la division tripartite des étants, *De entibus realibus, rationis & linguae*, mais aussi, et de manière pour nous plus intéressante, dans son impitoyable critique des *entia rationis*. Elle figure, notamment, dans un passage autobiographique de la *Metalogica*, évoquant des discussions à Vienne et à Louvain[43]. On la retrouve dans les *Disputationes* de Polizzi, toujours en liaison avec l'admission ou la non-admission d'êtres de raison[44]. Brentano lui-même emploie l'expression dans un important passage

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das Korrelatenpaar *a(*R*b)* und *b(R*a),* wobei R* konvers zu R ist und (R*b*), *(*R**a)* die Formen der betreffenden monadischen Bestimmungen von *a* und *b* sind. Nun paßt das aber nicht für die Denkbeziehung, denn wenn wir *a(Rb)* das Denkende und *b(*R**a)* das Gedachte repräsentieren lassen, so würde von *(*R**a)* repräsentierte Prädikat 'wird-gedacht-von-*a*' auf *b* zutreffen und also die Existenz von *b* verlangt sein. Die Ausnahme, die die Denkbeziehung nach Aristoteles ist, stellt sich so dar, daß die Form des Gedachten vielmehr so etwas ist wie *(b*R**)a,* was aber nur zum Prädikat '*b*-wird-gedacht-von' führt, das sich bloß durch die sprachliche Passivform vom Prädikat 'denkt-b' unterscheidet [17]. So ist *(b*R**)* nicht mehr als nur ein *ens linguae,* als welches das Gedachte an der angeführten Aristoteles-Stelle jedenfalls implizit gefaßt wird. ».

[42] Sur ce thème, cf. Pastine (1972).

[43] Caramuel y Lobkowitz (1654, p. 43): « Viennae anno 1647, hanc Propositionem defendi, *Ens rationis, quod habeat tantum esse in intellectu, non datur.* Lovanii eamdem pluries propugnavi, & Doctores audivi se nihil aliud *Entis rationis* nomine, re bene discussa intelligere posse, quam quod nos *appellamus Ens linguae. »* Sur ce point, cf. Velarde (1983, p. 27): « Caramuel niega realidad a los entes de razón: es ésta una de las tesis fundamentales de su filosofía, y que aparece constantemente en sus obras filosóficas. Contra los tomistas, por ejemplo, que ponen el objeto de la Lógica en el ente de razón, insiste una y otra vez en que hablar de entes de razón es pura Logomaquia. Descartes afirma que se dan los entes de razón, y Caramuel le dice haber demostrado que no se dan las quimeras ni los entes de la razón; éstos son "*pura entia linguae nec ad mentem spectant*". » La citation anticartésienne est tirée des *Animadversiones in Meditationes Cartesianas, quibus demonstratur clarissime nihil demonstrari a Cartesio* de 1644 (cf. Pastine 1972, p. 191).

[44] Cf. Giuseppe Polizzi, *Disputationes in universam philosophiam in tres tomos distributae*, tome I, Logica, Palerme, 1675 chez Domenico d'Anselmo, cité dans Dollo (1984, Chap. 4, p. 121–122). La polémique avec Caramuel se lit en *Disputationes* …, I, 152–153 et 174–180.

d'une lettre à Marty de 1906, où il rejette la thèse selon laquelle « ce qui est n'inclut pas seulement des choses, mais encore l'être ou le non-être des choses, ainsi qu'une légion, en fait, une infinité d'impossibilités ». Marty admet que l'être d'un arbre est lui-même quelque chose qui est, et doit admettre que le non-être de la montagne d'or « est », ou que l'impossibilité du cercle carré « est ». Pour Brentano, au contraire, il n'y a là qu'une « figure » du langage, un « abus » langagier qui mène à des fictions ontologiques, entraînant elles-mêmes des illusions sur nos propres activités psychologiques, en nous laissant croire que nous « jugeons *affirmativement* », et donc *affirmons* ou posons *quelque chose*, là où, en réalité, nous « *nions* quelque chose » (Brentano 1977, pp. 172–173. Cf., sur ce point, Albertazzi 2006, Chap. 6 (« Ficciones »), p. 218). L'*ens linguae* est donc un autre nom de ce que Marty et Brentano[45] lui-même appellent '*ens elocutionis*', à savoir, selon la formule de L. Cesalli: une « pseudo-entité résult[a]nt d'une hypostase abusive effectuée à partir du langage et selon laquelle pouvoir être linguistiquement décrit ou nommé suffit à conférer une place dans l'ontologie ». Le mouvement dénoncé par Brentano correspond à la « pratique illégitime d'hypostase » analysée par Cesalli, lecteur de Marty, comme « principe de seule formulabilité (SF) », ainsi défini : $SF_{déf}$: '*x* est un *ens elocutionis*' = 'la seule justification de *x* est de pouvoir être formulé'.

A l'objection que, « en imaginant », quelqu'un peut avoir « l'impossibilité du cercle carré » comme *objet de pensée*, Brentano répond que celui-ci « ne pense pas au cercle carré » (ou, si l'on préfère, qu'il ne pense pas le cercle carré), mais *procède comme le mathématicien* quand il recourt à des « fictions » (qualifiées d'*absurdes*) telles que les « quantités négatives », les « nombres irrationnels ou imaginaires », etc. On a ici affaire à un simple « être linguistique », *ens linguae*, qui devient une « fiction ayant un fondement dans la réalité », un *ens rationis cum fundamento in re*, entendant par là une fiction qui, certes, *n'a rien de véritable*, mais qui présente un lien si étroit avec la vérité qu'elle peut se montrer utile, en nous en favorisant l'accès (Sur l'*ens linguae* et l'*ens elocutionis* chez Brentano, voir Kobusch, 1987, p. 278).

Confondant corrélatifs et *relata*, les tenants de l'*opinio communis* ne peuvent voir le ressort profond de l'évolution de Brentano. L'abandon du réquisit existentiel dans la théorie de la relation signifie admettre qu'il peut y avoir *des relatifs sans corrélats*. C'est là, selon Sauer, le grand changement qui résulte du virage réiste et de l'adoption de la distinction entre mode direct et mode oblique de la pensée. Avant ce virage, dès 1874, Brentano soutenait seulement qu'il y avait *des relatifs sans couple de relata*—comme dans le cas du centaure, où n'existe que le *'pensant-au-centaure'*[46].

[45] Cf. A. Marty, *Untersuchungen zur allgemeinen Grammatik und Sprachphilosophie*, Halle, M. Niemeyer, 1908, 330–331; F. Brentano, *Die Lehre vom richtigen Urteil*, F. Mayer-Hillebrand (éd.), Bern, Francke, 46–47, cités par Cesalli (2009, *loc. cit*).

[46] Sauer (2006, p. 24): « Wurde oben gesagt, es sei der charakteristische Zug der Relationenlehre des späten Brentano, daß sie für das Bestehen einer Beziehung nicht die Existenz zweier Entitäten verlange, so sehen wir genauer, wie das zu verstehen ist: nämlich so, daß es *Relativa ohne Korrelat geben kann.* Von Brentanos eigenem Standpunkt her ist *das* die große Änderung nach der reistischen Wende und der Unterscheidung von *Modus rectus* und *Modus obliquus* des Denkens.

Si l'on veut marquer les étapes par lesquelles est passée la théorie brentanienne de l'acte de pensée comme théorie relationnelle de l'acte, on peut, suivant Sauer, distinguer:

1. Initialement, l'acte de penser est, pour Brentano, un véritable relatif, parce qu'il a un corrélat non réel
2. Vers la fin de la période préréiste, ce n'est *plus un relatif au sens propre, et pour la même raison*: son corrélat est non réel
3. Dans les premiers temps de la période réiste, l'acte de penser n'est *absolument pas* un relatif
4. Dans la phase la plus mûre du réisme, sur la base de la distinction entre *mode direct* et *mode latéral*, l'acte de penser redevient un relatif,

   i. d'abord, en un sens impropre,
   ii. puis, au sens propre,
   iii. ce qui coïncide avec la thèse que le pensé est un simple « être linguistique » (*ens linguae*),

autrement dit, selon Brentano, avec la thèse authentique d'Aristote[47].

Aucun de ces changements n'affecte la conception de la « structure interne de l'acte de penser » ni l'équation qui, en un sens résume à elle seule la théorie que j'appelle « adverbiale » de la pensée: « Wer sagt, ein A-Denkender sei und ein gedachtes A sei, sagt ganz und gar dasselbe, und der letzte so wenig als der erste, daß A selbst sei » (Brentano « Vom Objekt » 1977, p. 339)[48]. Aucun n'impose rétrospectivement, comme caractéristique de la théorie préréiste de l'intentionnalité, l'adoption de la lecture « ontologique » popularisée par Chisholm (Sauer 2006, p. 25).

Autrement dit, il serait absurde de nier l'évolution de Brentano *du conceptualisme au réisme*. Le débat ne peut porter que sur la nature des étapes distinguées, et en l'occurrence sur celle de la phase médiane placée par la plupart des interprètes entre le conceptualisme des années 1862–1874 et le réisme des années 1904–1917, à

Was er dagegen schon immer gehabt hatte, waren *Relativa ohne ein Paar von Relata:* eben die intentionalen Relativa wie das Zentaur-Denkende oder jede äußere Wahrnehmung, gibt es doch auch für den Brentano von 1874 keine Sinnesqualitäten, keine Farben, Töne usw. in der physischen Welt (cf. PES, I, p. 13 *f.*) ».

[47] Sauer (2006, p. 24–25): « Das sind demnach die Stationen: Zunächst war der Denkakt ein echtes Relatives, weil er ein nichtreales *Korrelat* hatte; sodann gegen Ende der vorreistischen Zeit ein uneigentliches Relatives, weil er ein *nichtreales* Korrelat hatte; darauf in den der ersten reistischen Zeit als solcher überhaupt kein Relatives; und endlich aufgrund seiner *recto/obliquo*-Struktur wieder ein Relatives, vorerst noch in eher uneigentlichem Sinn und schließlich im ganz eigentlichen Sinn, womit sich der Kreis schließt, aber so, daß das Gedachte zu dem *ens linguae* reduziert worden ist, das es bei Aristoteles eigentlich schon war… ».

[48] La question reste de savoir jusqu'où s'étend *objectivement* le *dédoublement-redoublement* du penseur caractéristique de la *mise en scène adverbialiste* brentanienne du porteur de vérité. Comme le dit le texte du ms. Ps 34, *Relationen*, n°51070, du *Nachlaß*, mis en exergue par Cesalli & Taïeb, « *The road …* », où *'wer'* désigne possiblement A lui-même: « Es ist wohl sicher, dass wer Ein-B-denkendes-A denkt, ausser dem B-denkenden auch B denkt. Ob er aber *ausserdem* auch Von-A-gedachtes-B denkt, das ist die Frage. ».

savoir ce que A. Chrudzimski et B. Smith ont appelé *l'ontologie de l'intentionalité*, censée caractériser les années 1874–1904.

La coréférentialité des expressions (il y a un) « pensant-A » et (il y a) un « A-pensé », en tant qu'elle implique qu'il y a un pensant-A, mais pas qu'il y a un A, est une donnée transversale de la théorie brentanienne de l'intentionnalité. C'est la base de la théorie adverbiale de la conscience et du jugement. La dénomination extrinsèque et la distinction entre *modus rectus* et *modus obliquus* rendent possible, instrumentent, puis, pour finir, scellent la rencontre de la sémantique (philosophie du langage) et de la psychologie (philosophie de l'esprit). Elles le font, largement, dans le cadre d'une théorie de la relation et des relatifs, qui se veut et est, jusqu'à un certain point, aristotélicienne[49].

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Chapter 24
Austrian Philosophy and its Institutions: Remarks on the Philosophical Society of the University of Vienna (1888–1938)

Denis Fisette

Deutsche! Wann werdet ihr von einer Verirrung, welche euch euren Nachbarn nur ungenießbar und lächerlich macht, endlich zurückkehren?

B. Bolzano

Und auch dieser Ruf des edlen Philosophen verdient, noch in unsere Zeit gehört zu werden!

J. C. Kreibig

Abstract This study examines the place of the Philosophical Society of the University of Vienna (1888–1938) in the evolution of the history of philosophy in Austria, up to the establishment of the Vienna Circle in 1929. I will examine three aspects of the relationship between the Austrian members of the Vienna Circle and the Philosophical Society which has been emphasized by several historians of the Vienna Circle: The first aspect concerns the theory of a first Vienna Circle formed mainly by H. Hahn, P. Frank, and O. Neurath; the second aspect is the contention that the missing link between the Vienna Circle and the Bolzano tradition in Austria is Alois Höfler, a student of Brentano and Meinong; I will finally examine the link they established between the annexation of the Philosophical Society to the *Kant-Gesellschaft* in 1927 and the founding of the Vienna Circle in 1929. I will argue that this institution played a key role in the history of philosophy in Austria and is partly responsible for the formation of the Vienna Circle.

Keywords Brentano · The Philosophical Society of the University of Vienna · Vienna circle · Austrian philosophy · The school of Brentano

Many studies on the history of Austrian philosophy are dominated by the idea of a specifically Austrian philosophy (or Austro-Hungarian), whose origins date back to the Prague philosopher Bernard Bolzano, and whereby the focus is placed on

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Brentano's philosophy and his student's original contributions to this research program. This idea is at the heart of Otto Neurath's book published in French in 1935 under the title *Le développement du Cercle de Vienne et l'avenir de l'empirisme logique,* in which he indicates that the philosophy promoted by the Vienna Circle is not only indebted to this Austrian philosophical tradition, but can been seen as its culmination. The thesis of a specifically Austrian philosophy has recently been held by Rudolf Haller in a number of studies, most notably in an article entitled "Wittgenstein and Austrian Philosophy," in which he formulates the so-called Neurath-Haller Thesis.[1] According to this thesis, there is, since Bolzano, an autonomous Austrian philosophy (particularly with respect to the German tradition) which possesses an "intrinsic homogeneity" that can be characterized among other things by its scientific worldview and its aversion for Kantianism and metaphysics.

In recent years, this thesis has given rise to a number of discussions which we will not examine here (on this question, see Mulligan's recent article 2011). We shall focus our efforts on the issue of the empirical circumstances regarding the development of this Austrian *Geist* up to the foundation of the Vienna Circle in 1929. In other words, we will examine the institutional and cultural factors that have made possible, at a concrete level, the transmission of this tradition. K. Mulligan[2] and B. Smith[3] have both recognized the importance of this question and the significance of sociopolitical, economic, and cultural factors, and more generally of institutions, in the explanation of this phenomenon. But which factors and institutions were specifically at play? Smith does not directly address this question, but refers to the manifesto of the Vienna Circle in which Neurath, its main author, emphasizes the importance of the Philosophical Society of the University of Vienna (of which Neurath was himself an active member from 1906 to the mid-1920s; cf. Neurath 1935, 1929, p. 302). Founded in 1888, the Philosophical Society ceased its activities in 1938, the year that Husserl, one of its most faithful members, died. Since its foundation, this organization served as a forum for philosophical discussions which brought together Vienna's major philosophical, scientific, and literary figures of the late nineteenth century. More than 600 conferences were delivered within this society during the 50 years of its

[1] Haller (1981, p. 92) formulates this thesis as follows: "I wish […] to defend two theses: first, that in the last 100 years there has taken place an independent development of a specifically Austrian philosophy, opposed to the philosophical currents of the remainder of the German-speaking world; and secondly that this development can sustain a genetic model which permits us to affirm an intrinsic homogeneity of Austrian philosophy up to the Vienna Circle and its descendants."

[2] Mulligan (2001, p. 8) writes on this question: "But the institutional and cultural history of the effects of Bolzano, Brentano and his students remains to be written."

[3] Smith (1996, p. 6) recommends a mixed explanation that appeals to institutional factors: "Hence there is a need, in regard to our specific problem of the rise of scientific philosophy in interwar Vienna, to provide a mixed explanation, one that makes room both for institutional and economic and sociopolitical factors of the kind so far considered and also for the serendipitous role of individuals. A forceful and coherent explanation along exactly these lines has been provided by Neurath himself, in the section labeled 'Prehistory' of the Vienna circle manifesto."

existence[4] and its members were not only for the most part Austrian philosophers from that era but also many scientists and intellectuals interested in philosophical issues. It is therefore surprising that such a respectable institution has never been the subject of a systematic study.[5] There are however a few studies that have emphasized the importance of this organization's activities for its members, the most well known and earliest being that of C. Schorske, *Fin-de-Siècle Vienna: Politics and Culture,* in which he examines the "Klimt Affair," a question we will later return to more in detail.[6]

But these studies provide us only with a limited perspective on the diversity and the richness of the discussions that took place between the Society's members and explain even less the role of this organization in the evolution of ideas during this decisive period in the history of philosophy in Austria. For want of describing in detail the proponents and the accomplishments of this organization, we will predominantly focus on the importance of the Philosophical Society in the genesis and prehistory of the Vienna Circle. We will examine three aspects that characterize the relationship between the members of the Vienna Circle and the Philosophical Society. The first aspect deals with the thesis of a proto-Vienna Circle; the second concerns the missing link thesis connecting the Vienna Circle with the philosophical tradition of Bolzano and Brentano in Austria; and finally, the third corresponds to the connection established by many historians of logical empiricism between the Philosophical

[4] R. Meister (1938) has drawn up a list of the conferences and discussions that marked the history of the Philosophical Society during the 50 years of its existence.

[5] Cf. J. Blackmore (2001a, p. 74) offers the following explanation: "We are only at the start of a serious research into the Vienna Philosophical Society and there are many more basic documents and publications which still must be found in order to really understand this remarkable organization and how it could have slipped out of scholarly attention so completely." Thanks to the technological resources that are presently at our disposal, we now have access to most documents relating to the Philosophical Society. Cf. bibliography.

[6] In addition to a study written by Schorske (1980), let us mention the edition of a portion of Otto Weininger's correspondence by H. Rodlauer (1990). Rodlauer has shown that the discussions within the Society have directly contributed to the philosophical and scientific education of the young Weininger and to the development of his classical work, *Geschlecht und Charakter* (Weininger 1903). We should also mention the studies written by J. Blackmore (1995, 2001a, 2001b) on Mach and Boltzmann, in which he insists on several occasions on the importance of the Society for this segment of the history of philosophy in Vienna. More recently, T. Uebel (2000) has insisted on the importance of the discussions in the Philosophical Society regarding the philosophical education of the Austrian members of the Vienna Circle, particularly that of Otto Neurath, to which we will return later. Breuer's biographer, A. Hirschmüller (1978), has also discussed Breuer's active participation in the Society's activities and has published part of his correspondence with Brentano regarding the famous dispute on Darwinism, which Rodlauer also discusses. D. R. Coen (2007) has examined another debate within the Philosophical Society about Adolf Exner's rectorial address (Exner 1891) which gave rise to Brentano's well-known article "Über die Zukunft der Philosophie" and in which A. Höfler, W. Jerusalem and F. Jodl also took part. Recently, in a book entitled *The Schenker Project*, N. Cook (2007) has offered a commentary of Heinrich Schenker's conference (February 15 and March 18, 1895) entitled "Der Geist der Musikalischen Technik."

Society's annexation to the Kant-Gesellschaft in 1927 and the foundation of the Vienna Circle in 1929.

24.1 The Characteristic Features of the Philosophical Society of the University of Vienna

Let us start with a brief description of the Philosophical Society of the University of Vienna. Thanks to the testimony of some of the Society's members and especially its annual reports,[7] we possess a great deal of valuable information concerning its origins, its structure, its activities, and the characteristic features that distinguish it from other societies, for which most Viennese of that time expressed a predilection. We know first of all that the Philosophical Society was officially founded on March 26, 1888 by students of Franz Brentano. One of these students, who contributed to its creation, was the Polish philosopher Kazimir Twardowski who recounts in his autobiography the circumstances under which the Society was founded. Twardowski mentions, in addition to the informal seminars held by Brentano at the University of Vienna, the creation of a discussion group comprised some of Brentano's students:

> But my philosophical study was not exhausted by attending lectures and seminars and by the solitary reading of philosophical writings, among which the works of the British philosophers were at the forefront. It also found valuable nourishment and maturation from a group reading (together with a number of similarly disposed philosophy students) of the major works of Aristotle. This philosophical reading club was formed on the initiative of Dr. Hans Schmidkunz, later well known in wide circles as the author of philosophical books and champion of higher-school pedagogy, to whom a lasting friendship binds me ever since those University years. Dr. Schmidkunz not only launched that reading club, in which we delved deeply—in the spirit of Brentano—into the reading and interpretation of Aristotle's original text (with the aid of Thomas Aquinas commentary), but also managed to initiate regular meetings devoted to philosophical exchange between the veterans and the beginners from among Brentano's students, which not only brought the individual participants personally closer together, but also led to the inauguration in 1888, likewise due to the impetus of Dr. Schmidkunz, of the Philosophical Society at the University of Vienna. I was rather proud to be elected the first Vice-President of that Society. My close relations to Alois Höfler, J[osef] Clemens Kreibig and Christian von Ehrenfels to mention those names that are of philosophical interest, go back to that time. (Twardowski 1999, p. 21; cf. Jahresberichte 1897–1898, 1912–1913 on the circumstances surrounding the foundation of the Philosophical Society)

K. Twardowski, H. Schmidkunz, J. C. Kreibig, C. von Ehrenfels, and A. Höfler were indeed very active during the first 30 years of the Philosophical Society's existence and most of them held key positions in the administration of this organization. Höfler was appointed as the first president of the Society and held this position at two different occasions, as we shall see later. The list of the Society's members, updated in each of the annual reports, mentions the names of many other students

[7] The annual reports of the Philosophical Society were published from 1888 to 1918 under the title "Jahresbericht der philosophischen Gesellschaft an der Universität zu Wien" (= Jahresbericht).

of Brentano, most notably: A. Meinong and most of his students from Graz; Husserl, who was studying since 1886 under the supervision of Carl Stumpf in Halle; Franz Hillebrand, a student of Marty, E. Heiring and E. Mach in Prague; and many other lesser-known students such as Richard Wahle, Karl Neisser, Georg C. Fulda, Eduard Leisching, and Alfred von Berger, just to name a few. Most of Brentano's students held the majority of positions in the Austrian universities, while others held administrative functions, such as E. Leisching, the director of an art museum (Cf. Leisching 1978), K. Neisser, who was a librarian, and the flamboyant Alfred von Berger who is known for having been director of the *Burgtheater* of Vienna (Cf. Bettelheim 1915). Like most of his students, Brentano was heavily involved in the activities of the Society and gave the inaugural address entitled "On the Method of Historical Research in the Discipline of Philosophy" (Brentano 1888), a conference known for characterizing as pathological the system-building efforts of the German idealists. He will deliver again five other conferences before leaving Austria for Switzerland in 1895; most notably, one on the concept of truth (Brentano 1889) and another one on the future of philosophy (Brentano 1893).

That being said, despite the involvement of Brentano and his students in this organization, the initial vocation of this Society was not aimed at promoting the interests of a particular group, nor a specific cause, which was the case with other important associations at the time, such as the *Volksbildungsverein,* the Ethical Society, or even the Vienna Psychoanalytic Society. As a society of the University of Vienna, it depended directly upon the support of the Faculty of Philosophy and its professors. In this respect, we need to remember that Brentano's academic situation as a privatdozent since 1880 and his strained relationship with the state deprived him of any academic power. As such, Brentano's assistance to his students' initiative in founding the club came mostly in the form of moral support. The academic support came rather from Robert Zimmerman, who was since the resignation of Brentano the only full professor within the Department of Philosophy and who held the position of rector at the University of Vienna the year the Philosophical Society was founded. Many of the Society's annual reports emphasize Zimmerman's major contributions to the Society (Jahresbericht 1897–1898, p. 3, 1888, pp. 5–6, 1888–1889, p. 5): Not only was he responsible for the Society's institutional foundation but he was also very active within the organization and presided over it for nearly a decade (from 1889 up to his death in 1898). Two annual reports inform us of the existence of tensions between, on the one hand, Zimmerman and, on the other, Brentano and his students. The origin of the conflict lay in Zimmerman's bias towards Herbart's philosophy and his desire to instill it in the Philosophical Society (Jahresbericht 1893–1894, p. 12, 1912–1913, p. 6). This in all likelihood would explain Höfler's resignation as the president of the Society only three semesters after its foundation.

Much like Brentano, Zimmerman had recognized very well the potential of this select club for the future of philosophy in Austria. In one of his many articles on the history of philosophy in Austria, "Philosophie und Philosophen in Österreich" published in 1889, Zimmerman already recognized in this young society "the organ" of a generation of researchers in philosophy and in the sciences, who, under the influence of philosophers such as A. Comte and J. S. Mill, endorsed empiricist

principles (Zimmermann 1889, p. 269). As a student of Bolzano and a proponent of the philosophy of Herbart, Zimmerman's claim is significant. It allows us indeed to identify a dominant orientation in the history of philosophy in Austria, stretching from Bolzano to the Vienna Circle, and including Herbartianism, which dominated the history of philosophy in Austria for a number of years, the School of Brentano, and a few other members of the Philosophical Society such as T. Meynert and other students of Brentano mentioned by Zimmerman in this article. This empiricist orientation, by which Zimmerman characterizes the philosophical position common to all of the Philosophical Society's founding members, is indeed the common denominator of the history of the Philosophical Society up to the Vienna Circle. This tendency expresses itself most notably with respect to its members' predilection for British empiricism, as it is shown in many conferences and discussions on this topic. This has also been noticed by Neurath in the historical portion of his book, in which logical empiricism appears to be the culmination of these empiricist orientations expressed within the history of Austrian philosophy since Bolzano. As the first sentence of the book explains, Vienna centralizes "the conditions conducive to the development of an *empiricist attitude* such as the one radically professed by the Circle" (Neurath 1935, p. 8). In a speech delivered on the occasion of his 70th birthday, Zimmerman states that this empiricist tendency was originally a reaction to the decline of speculative systems and particularly, German idealism (Jahresbericht 1893–1894, pp. 4–13). Brentano's philosophy of history upheld by most of his students is also based on the same assessment.

Zimmerman's remark on the involvement of researchers from the natural sciences in the Philosophical Society introduces another important characteristic feature of this institution, namely its interdisciplinary vocation. This is ascertained by the membership list and the conferences delivered at the Society during the first years of its existence. We can observe that not only professional philosophers did not constitute the majority of the Society's membership but also that the founding members of the Society, who belonged to other departments in the Faculty of Philosophy, were indeed very involved in the organization and the activities of the Society. Zimmerman mentions, rightly so, the contribution of T. Meynert (Cf. Höfler 1892), a student of Rokitansky, who was himself a student of Bolzano. But we should also call attention to the involvement of many of Meynert's colleagues from the Department of Medicine, such as J. Breuer, Brentano's medical doctor and a collaborator of his student Freud, M. Benedikt, H. Obersteiner, and M. Kassowitz. Zimmerman also mentions Theodor Gomperz from the Department of Philology who, with his son Heinrich, is the cause behind Mach's hiring at the University of Vienna (Cf. Mayerhofer 1967). But the list does not end there. Indeed, many other well-known scientists were also active in the Society, notably members of the Department of Physics, such as Franz Exner and his Circle (Cf. Kralik and Schmid 1982; Coen 2007), L. Boltzmann, S. Meyer, M. Smoluchowski, F. Hasenöhrl, and P. Frank; the representatives of the Viennese School of Art History: F. Wickhoff, A. Riegl, and M. Dvorak; the famous Austrian economists Carl Menger, Josef Schumpeter, and Ludwig Bertalanffi; finally, some of the professors of the Department of Mathematics, such as Hans Hahn, and of the Department of Musicology, such as G. Adler.

That being said, this society was not solely the organ of the Faculty of Philosophy and, contrary to other organizations, it was not reserved exclusively to its members. Since its creation, this society attributed to itself a democratic vocation, a principle often emphasized in many of its annual reports (Cf. Jahresbericht 1896–1897, p. 2) and which translated itself concretely into what was called at the time in England "University extension" (Cf. Keilhacker 1929). This refers to a European movement that spread to Vienna in the 1880s with the establishment of the *Volksbildungsverein* (Circle of Popular Education) in which many of the members of the Philosophical Society were involved, including Ludo Hartmann, E. Reich, T. Leisching, T. Meynert, A. Lampa, F. Jodl, and W. Jerusalem. But whereas the vocation of the *Volksbildungsverein* lay in promoting scientific education to those who did not have access to it, the idea behind the expansion of the university was to extend and to democratize the activities of the teaching staff outside of the academic sphere and to make them accessible to the general public. Brentano's seminars, which led to the foundation of the Philosophical Society, represent an example of this movement. This explains for example that the membership of the Philosophical Society does not accurately reflect the number of audience members who regularly participated in the Society's meetings. The 1902–1903 annual report lists between 200 and 300 attendees, yet we know for a fact that a conference given by Jerusalem in 1904 attracted more than 800 people (Cf. Jerusalem 1925, p. 32).

Another distinctive feature of this society is the importance given to discussions during its meetings. The way in which discussions were conducted imposed itself not long after the Society's creation and it replaced the initial formula whereby discussions were to be limited only to parallel meetings on texts and topics determined beforehand. The new formula simply consisted in introducing the discussion topic with a short presentation and in confronting the point of views:

> These [discussions] (conducted for the most part by Höfler and by Kreibig during Höfler's four year absence in Vienna) are and were dedicated to the free exchange of ideas on all sorts of contentious philosophical problems that were usually of a more general nature; following the presentation of a very detailed issue by the commentators, and even if the discussions were spontaneously conducted without any particular preparation on the part of the other participants, they led nevertheless in most cases to the preferred option of reconciling the contradictory positions or at least to a clarification of the point of views required by all parties. (Jahresbericht 1913, pp. 8–9)

We know as well that these discussions continued most of the time at the "Kaiserhof" Café or the Mitzko Café near the university as indicated by many documents which even specify that most of the discussions simply did not go through the university.[8]

The choice of discussion topics was determined by the commission and could be related to one of the Society's conferences, a recent work, or even an event of general interest. The most well-known case is the "Klimt Affair." To make a long

[8] Every member of the Society received before each meeting an invitation (Einladung), on which appeared the agenda, the title of the conference, as well as an invitation to the members and their guests to take part in the evening discussion meetings that were held regularly at the Café Mitzko.

story short, the University of Vienna had ordered a painting from the painter Gustav Klimt intended for the new building housing the Faculty of Philosophy. Klimt produced a large mural entitled "Philosophy," which did not please the members of the Faculty, so much so that the latter signed a petition to have it removed. The art historian Franz Wickhoff resented his colleagues' haste in passing so rashly a categorical judgment in the absence of any competence in the matter. In fact, Wickhoff delivered a conference "Was ist häßlich?" [What is Ugly?] in front of a large audience in the course of which he defended Klimt (Cf. Bahr 1903; Strobl 1964). An annual report referred to Wickhoff's conference to show that the Society represented the forum where questions regarding current events were discussed philosophically at the time:

> Let us first take the example of F. Wickhoff's conference "What is Ugly?" and the discussions that resulted from the following general meeting of the Society. During this period, since all of Vienna was held in suspense by a particular artistic question, our Society proved to be a place where each question, in spite of it being a current event, could be treated with serene objectivity on the basis of documents provided by art history and, it would seem, to the satisfaction of all those who took part in the conferences and the discussions. (Jahresbericht 1899–1900, p. 1)

A final characteristic feature of the Society should be mentioned, namely its involvement in the publication and the edition of philosophical works. Indeed, in addition to the annual reports published between 1888 and 1917, and in which we find the list of the conferences and the discussions, the membership list, the purchases of the library, and its financial statements, the Society also published a selection of conferences and discussions in the proceedings which took on many names over the years.[9] In 1914, the Philosophical Society established the Bolzano Commission, whose mandate was to prepare the edition of Bolzano's complete works, including the manuscripts discovered in Zimmerman's archives. But only Bolzano's *Paradoxes of the Infinite* and the first two volumes of his *Wissenschaftslehre* were published by the Society (Cf. Bolzano 1914, 1920). We will later return to this topic.

24.2 The Proto-Vienna Circle and the Philosophical Society

With this concise description of the Philosophical Society of the University of Vienna, we may now address the question of its significance in the history of philosophy in Austria and its key role in the prehistory of the Vienna Circle. Neurath

[9] Between 1902 and 1911, the title of this publication was "Wissenschaftliche Beilage zum Jahresbericht der philosophischen Gesellschaft an der Universität zu Wien"; it was changed in 1912 to "Jahrbuch der philosophischen Gesellschaft an der Universität zu Wien," a title which remained until 1916. After a 10-year interruption, it was published between 1926 and 1935 under the title "Wissenschaftliche Jahresberichte." The Philosophical Society has also published works under the title "Veröffentlichungen der Philosophischen Gesellschaft an der Universität zu Wien": J. Reynolds (1893), A. Höfler (1899), I. Kant (1900), and A. Höfler (1900).

emphasized on two occasions the Philosophical Society's importance in the prehistory of the Vienna Circle: the first one in the Vienna Circle manifesto in which he insists on the importance of the numerous discussions on the foundations of physics and other problems relating to the logic and theory of knowledge[10]; he refers to it a second time in his 1935 book where he specifies on this occasion that the discussions that took place in the Society triggered a long process whereby the Vienna Circle was established:

> In Vienna, the logical tendency of the Brentano School was professed by a man who, by launching discussions on the foundations of physics, triggered the beginnings of the Vienna Circle at the onset of the 20th century: Alois Höfler, Professor of Pedagogy at the University of Vienna. He was, for a long time, responsible for the publications of the "Philosophical Society of the University of Vienna"; these publications reveal a dedication in confronting the same problems to which the Vienna School would later dedicate itself. (Neurath 1935, p. 38)

The reference to Höfler in this passage aims at establishing a certain continuity between the Vienna Circle and the philosophical program supported by Brentano and his students as well as to distinguish within the Society's history the periods chaired by Höfler from those chaired by other members of the Society, such as F. Jodl (1903–1912) and Reininger (1922–1938), to whom I will return shortly. It is indeed during Höfler's term as the Society's president that the discussions referred to by Neurath were the most significant.

24.2.1 Haller's Thesis on the Proto-Circle and Frank's Testimony

While Neurath simply focused on the filiation between logical empiricism and empiricist tendencies within Austrian philosophy, other historians have put forward the idea that there was, among the members of the Philosophical Society, a group that constituted what R. Haller has called the first Vienna Circle:

> The thesis I present for examination is this. Even before the founding of the so-called Vienna Circle around Moritz Schlick, there existed a first Vienna Circle with Hans Hahn,

[10] "Brentano and his students time and again showed their understanding of men like Bolzano (Wissenschaftslehre 1837) and others who were working toward a rigorous new foundation of logic. In particular Alois Höfler (1853–1922) put this side of Brentano's philosophy in the foreground before a forum in which, through Mach's and Boltzmann's influence, the adherents of the scientific world conception were strongly represented. In the Philosophical Society at the University of Vienna numerous discussions took place under Höfler's direction, concerning questions of the foundation of physics and allied epistemological and logical problems. The Philosophical Society published Prefaces and Introductions to Classical Works on Mechanics (1899), as well as the individual papers of Bolzano (edited by Höfler and Hahn, 1914 and 1921). In Brentano's Viennese circle there was the young Alexius von Meinong (1870–1882, later professor in Graz), whose theory of objects (1907) has certainly some affinity to modern theories of concepts and whose pupil Ernst Mally (Graz) also worked in the field of logistics. The early writings of Hans Pichler (1909) also belong to these circles" (Manifesto 1929, p. 303).

> Philipp Frank and Otto Neurath. This circle is of such constitutive importance for the formation of the circle around Schlick that the judgment can be justified that it was really Hans Hahn who founded the Vienna Circle. To draw attention to this I call the one the first, the other the second Vienna Circle. (Haller 1991, p. 95)

This thesis has been reiterated and developed systematically by other historians of Austrian philosophy, particularly F. Stadler and especially T. Uebel (Cf. Uebel 2000, p. 76 sq). This thesis is based on a remark made by Philipp Frank in the introduction to his book *Modern Science and its Philosophy,* where he alludes to the existence of a discussion group that met in Vienna in the 1900s and whose most active members were himself, Hahn, and Neurath:

> At the time when the first chapter of this book was written (1907) I had just graduated from the University of Vienna as a doctor of philosophy in physics. But the domain of my most intensive interest was the philosophy of science. I used to associate with a group of students who assembled every Thursday night in one of the old Viennese coffee houses. We stayed until midnight and even later, discussing problems of science and philosophy. Our interest was spread widely over many fields, but we returned again and again to our central problem: How can we avoid the traditional ambiguity and obscurity of philosophy? How can we bring about the closest possible rapprochement between philosophy and science? By "science" we did not mean "natural science" only, but we included always social studies and the humanities. The most active and regular members of our group were, besides myself, the mathematician Hans Hahn, and the economist, Otto Neurath. (Frank 1949, p. 1)

Frank informs us also that Hahn, Neurath, and himself did not only take interest in the *Grenzfragen* regarding their respective fields, but that they also strived in these discussions "to absorb as much information, methodology and background from other fields as we were able to get" (Frank 1949, p. 1). There is reason to believe that the discussions that fueled these famous meetings were not unrelated to the Philosophical Society's activities, to which Franck as a physicist, Neurath as an economist, and Hahn as a mathematician owed much of their philosophical instruction. This is initially confirmed at the beginning of Franck's first conference in 1907 at the Philosophical Society entitled "Mechanismus oder Vitalismus?": "The Philosophical Society was always the place where the representatives of different scientific fields met to discuss the boundary questions of their respective disciplines" (Frank 1908, p. 393).

Another passage in the introduction to his 1949 book indicates that Hahn, Neurath, and Franck were not the only members of this group but also that their discussions addressed topics that were for the most part remote from their academic concerns:

> This apparent internal discrepancy provided us, however, with a certain breadth of approach by which we were able to have helpful discussions with followers of various philosophical opinions. Among the participants in our discussions were, for instance, several advocates of Catholic philosophy. Some of them were Thomists, some were rather adherents of a romantic mysticism. Discussions about the Old and New Testaments, the Jewish Talmud, St. Augustine, and the medieval schoolmen were frequent in our group. Otto Neurath even enrolled for one year in the Divinity School of the University in order to get an adequate picture of Catholic philosophy, and won an award for the best paper on moral theology. This shows the high degree of our interest in the cultural background of philosophic theories and our belief in the necessity of an open mind which would enable us to discuss our problems with people of divergent opinions. (Frank 1949, pp. 1–2)

For the moment, we will abstain from identifying the other members of the group in question, but it is very likely that they are for the most part members who regularly participated in the activities of the group during the period referred to by Frank.[11]

There are other reasons to think that the discussions within this group were fueled by the activities of the Philosophical Society. First, we should remember that Hahn, like Victor Kraft, who arguably belonged to this group, became members of the Society as early as 1901, followed by Frank (1903), Neurath (1906), Olga Hahn (1908), and Edgard Zilsel (1913). They delivered many conferences within the Society and all took part actively in the discussions (Cf. Uebel 2000, pp. 140–142). Hahn, Franck, and Kraft were all involved in the administration of the Society: In 1899, Kraft contributed to the edition, prepared by the Philosophical Society, of Kant's work *Metaphysische Anfangsgründe der Naturwissenschaft*; Hahn contributed to the edition of *The Paradoxes of the Infinite,* while Franck was in 1911 the Society's secretary.[12] It should be mentioned finally that P. Frank and H. Hahn remained members of the Philosophical Society even after having left Vienna. It is therefore very likely that these Thursday meetings to which Frank refers in his introduction coincided most of the time with the Society's activities and focused on the organization's conferences and discussions. Thus, the arguments raised in support of an initial Vienna Circle seem on the contrary to indicate that the activities of the group in question were inseparable from the activities of the Society and that, if we rely on the testimony offered by Frank, this pseudo Vienna Circle was in fact simply a group comprised of a few members of the Philosophical Society who mainly discussed various questions that stemmed from the organization's activities.

24.3 The Missing Link and the Reception of Bolzano in Austria

Let us now come back to the more general question of the Philosophical Society's role in the history of philosophy in Austria, up to the foundation of the Vienna Circle in 1929. By relying on the diagnostic made by Neurath in his 1935 book, Uebel (1999, p. 259) argued that the missing link connecting the Austrian tradition, represented by Bolzano and Brentano, with the Vienna Circle was none other than Höfler himself. This argument was systematically developed in his voluminous work on Neurath, in which he formulates his argument as follows:

[11] Many of the Society members that were active at the time correspond to Frank's description: Hans Pichler, also mentioned by Neurath (1935, p. 37), Wolfgang Schultz, who contributed to the edition of Bolzano's works and possibly Hans Von Arnim, T. Gomperz's replacement, Oskar Ewald, Emil Lucka, and Robert Eisler. It should be noted that Hahn was also interested in parapsychological phenomena (cf. Menger 1988).

[12] One of the Society's annual reports (Jahresbericht 1911, 1912, p. 2) mentions Frank's significant contribution to the Society as well as his involvement as a speaker and a member responsible for discussions pertaining to philosophical problems in physics.

> In the work and person of Höfler met the Austrian philosophical tradition and modern philosophical Vienna. This is suggested by a closer examination of both aspects of Höfler's influence, which had a special meaning for the first Vienna Circle. (Uebel 2000, p. 104)

This thesis has also been supported more or less explicitly by J. Blackmore in his book on Boltzmann, in which he emphasizes Höfler's role in this history so much so that he speaks of Höfler's Society (Cf. Blackmore et al. 2001). At first glance, this thesis may seem plausible notably because of the key positions held by Höfler in the Society since its foundation. Indeed, he led the discussions for more than 20 years, he was president on three occasions (1888, 1898–1903, and 1913–1922), and he received the title of honorary president (*Ehrenpräsident*) when he left for Prague in 1903. Moreover, this student of Boltzmann and Stefan already possessed a solid education in the fields of physics and mathematics, and his diverse philosophical interests made him an indispensable intermediate in the discussions between scientists and non-scientists. And as a student of Brentano and especially of Meinong, he maintained privileged ties with many of the Society's members, particularly Kreibig, Schmidkunz, von Ehrenfels, and K. Twardowski who, as we have shown, were all very involved in its administration and its activities.

That being said, other indications contradict Uebel's thesis and question the disproportionate importance given to Höfler in the Philosophical Society and, more generally, in the transmission of Brentano's and Bolzano's ideas. Ample information contained in his autobiography seems to indicate, for example, that despite his academic interest for the *Grenzfragen* of philosophy and the natural sciences, Höfler was far from sharing the scientific world view of the positivists as well as their aversion for Kantianism and metaphysics. Regarding the question of his relationship to Kantianism, a passage in his autobiography clearly indicates that he did not share Brentano's philosophy of history and his assessment of the philosophy of Kant and Schopenhauer:

> Thus when I heard Brentano speak with contempt about Kant and Schopenhauer and jest about Wagner, it was not so much my understanding but my spirit that guarded me from his so-called world view entirely different from divine and human affairs. (Höfler 1921, pp. 120–121)

How can this full-pledged member of the Kant-Gesellschaft, who always defended a Wagnerian world view as indicated in his later writings, most notably on Schopenhauer (Cf. Höfler 1920, p. 89), represent the Austrian philosophical tradition and act as the missing link between Bolzano and the Vienna Circle? Moreover, considering that Boltzmann and especially Mach held a special significance for the members of the Vienna Circle, we must remember that Höfler, in one his biographical texts on Brentano, criticized the Faculty's decision to hire Mach, who never defined himself as a philosopher, and "Boltzmann, the neophyte in philosophy" who was in reality rejecting it (Höfler 1917, p. 325).

The supporters of the missing link thesis would undoubtedly respond to these objections by arguing that Höfler's philosophical allegiance had never stopped him from playing a key role in the transmission of Brentano's ideas and particularly

those of Bolzano to the Austrian members of the Vienna Circle. Against Uebel[13] and Blackmore, we would like to show very briefly, with respect to the example of Bolzano's reception in Austria, that Höfler's role in this history is marginal in comparison to the one played by many other members of the Philosophical Society and that the problem with the missing link thesis is that we must not let the trees hide the forest. In other words, the connection between the Austrian philosophical tradition and the Vienna Circle is made possible not by an individual, but by an institution.

24.3.1 The Reception of Bolzano in Austria

On March 9, 1914, the Philosophical Society sets up the Bolzano Commission, whose primary mandate, according to its statutes and rules, is mainly to ensure the reprinting of Bolzano's works and to publish the manuscripts discovered a few years before.[14] A few months earlier, during the first session of the Philosophical Society in 1913, Höfler presents with great pomp this commission's project in front of many of his faculty colleagues and members of the Society (Cf. Jahresbericht 1912–1913, p. 10), and recounts the stages that marked the history of this project. He quotes at the outset the 1902–1903 annual report that accounts for the discovery of Bolzano's manuscripts, including his function theory, that were for a long time in Zimmerman's possession:

> After many unsuccessful attempts […], a very important collection of Bolzano's original manuscripts which consisted of philosophical writings and mostly mathematical writings were discovered in the Imperial Court Library. The Society's secretary, Robert von Sterneck, examined these muddled manuscripts and we can now value the importance of this discovery. What has been discovered is nothing less than a manuscript on the "theory of functions" which was ready to be printed and is astonishingly close to the modern ideas. (Jahresbericht 1912–1913, pp. 6–7)

Following this discovery made by von Sterneck, Höfler made a few attempts to obtain the necessary funding to publish Bolzano's works, but these attempts failed particularly due to the fact that Höfler left Vienna and accepted in 1903 a position

[13] Uebel (1999) supports the missing link thesis by referring to a few arguments, notably Höfler's role in transmission of Bolzano's ideas to the Austrian members of the Vienna Circle. The first, on which we will focus here, insists on the importance of the textbooks written by Höfler for the teaching of philosophy in Austrian lyceums, notably the Logik of 1890 (written in collaboration with Meinong) which was the source of a lively controversy with Brentano (cf. Höfler 1921). Uebel argues that it is by means of this textbook that Hahn and Neurath, for example, became acquainted with Bolzano (T. Uebel 1999, p. 261, 2000, p. 109 sq.). It seems to us that this argument exaggerates the importance of this textbook with respect to education and particularly its Bolzanian content. We will grant more importance to another one of Uebel's arguments which asserts Höfler's role in the reception of Bolzano within the Philosophical Society and Austria.

[14] The statutes and the rules of the Bolzano Commission are recorded in a document approved on March 9, 1914, entitled "Soderstatut der Bolzano-Kommission der philosophischen Gesellschaft an der Universität zu Wien."

in Prague.[15] The discovery of Bolzano's manuscripts is indeed an important chapter in the history of Bolzano's reception in Austria, but it is not the first, nor the most important. This is shown in another annual report (1902–1903, p. 6) in which Benno Kerry's contributions are highlighted with respect to a series of articles that he published between 1885 and 1891 under the title "Über Anschauung und ihre psychische Verarbeitung" and in which he discusses notably the Bolzanian doctrine of the propositions in themselves (Cf. Kerry 1885–1891). The writings of Kerry exerted a crucial influence not only on Höfler (Cf. Höfler 1894) but also on K. Twardowski, which the latter confirms in his autobiography:

> My work *Zur Lehre vom Inhalt und Gegenstand der Vorstellungen. Eine psychologische Untersuchungen* grew out of these considerations. I endeavored to write it in the spirit of Franz Brentano—and of Bernard Bolzano, whose *Wissenschaftslehre* I studied with great zeal ever since I was steered to it by Kerry's paper *Über Anschauung und ihre psychische Verarbeitung*. (Twardowski 1999, p. 24)

In 1894, Husserl writes an essay, known today as "Intentional Objects," in which he discusses Twardowski's work and his interpretation of Bolzano. Two years later, in his 1896 course on logic, Husserl understands (pure) logic in the sense of Bolzano's *Wissenschaftslehre*. In 1900, he publishes his *Prolegomena to Pure Logic* in which he claims the rediscovery of Bolzano and uses the latter's *Sätze an sich* as an antidote to logical psychologism. The follow-up to the story is well known, and we now know the importance of the debates surrounding psychologism that the publication of Husserl's work generated within and mostly outside of the Society.[16]

This story's subsequent episode is the institutionalization of the Bolzano project in the Philosophical Society in 1914, that is, following Jodl's resignation as president and the return to power of Höfler and his allies. When presenting this commission in front of the members of the Society, Höfler clearly indicates that the commission's vocation was not only to publish Bolzano's complete works but also to promote the ideas of this "great Austrian philosopher":

> If I allowed myself to mention the creation of a Bolzano Commission within the Philosophical Society, it is first and foremost to avoid that this interest for this great Austrian philosopher subsides and to ensure that it fructifies durably […]. It suffices for the moment to emphasize that the Philosophical Society of the Vienna University, by what it accomplishes for Bolzano's works, now wishes to pay homage to him on behalf of a philosophical society. (Jahresbericht 1912–1913, p. 14)

[15] Marty's correspondence with Brentano gives us reason to believe however that there were other factors that delayed this project, and notably Marty's own opposition to it, as he was sitting on the commission charged with evaluating the Society's grant application for the funding of this project. In a letter dated February 19, 1905, and addressed to Brentano, Marty reminds the latter that there must be no question to provide Höfler with such an amount and adds that little wickedness, which he attributes to a colleague, that Höfler's main interest in this story was to appear on the cover page of Bolzano's complete works (Cf. Gimpl 1998).

[16] On the reception of Bolzano in Austria, a lesser known publication should be mentioned: a special issue of the journal Deutsche Arbeit (1908) that commemorates the 60th anniversary of Bolzano's death (1781–1848) with articles written by two of Brentano's students, H. Bergmann (1908) and E. Utitz (1908); the following year Bergmann publishes his book Das philosophische Werk Bernard Bolzanos (1909).

The creation of this commission coincides with the new edition of the first volume of Bolzano's Wissenschaftslehre prepared by W. Schulz (Bolzano 1914).[17] And it is not a coincidence if, in 1914, Twardowski delivered two conferences at the Society's Hauptversammlung which served as the basis for one of his most significant philosophical texts, that is, "Functions and Formations" (*Funktionen und Gebilde*) in which he understands the formations (or intentional contents), following Stumpf and Husserl, on the basis of Bolzano's model of the propositions in themselves.[18] The interest prompted by these two conferences can be measured among other things by the fact that they led to a few discussion meetings at the Society. It is not a coincidence if another member of the Bolzano Commission, Josef C. Kreibig, published the same year an article on Bolzano in which he emphasized the importance of the latter in the history of philosophy in Austria (Kreibig 1914). Kreibig suggests, as clearly indicated by the two passages placed as epigraphs to his article, that Bolzano was then what Kant represented and still represents for philosophy in Germany. He states the following on this subject:

> We have therefore good reasons to believe that the history of philosophy of the past century would have no significant event to report if it were not for Bernard Bolzano, a thinker whose universality, depth and sagacity deserve more admiration at the scientific level than so many glaring poetic thoughts glorified by his contemporaries. (Kreibig 1914, p. 274)

In summary, the Uebel–Blackmore thesis on Höfler's role as the missing link is questionable not only because of Höfler's philosophical positions, but also for the reason that his role in this history is relatively marginal compared to some of the other members of the Society. Here again, it is an institution, in this case the Bolzano Commission, that serves as the connection with the Austrian members of the Vienna Circle, and particularly with Hans Hahn who was a member of this commission. We should bear in mind however that the question of the reception of Bolzano in Austria, and particularly the different actions carried out by the members of the Philosophical Society with the aim of promoting the work and the ideas of Bolzano, can only make sense in the light of the symbolic value that the author of the *Wissenschaftslehre* holds in the history of Austrian philosophy. In the following section, we will attempt to show that this is the significance that he had for some of the Austrian members of the Vienna Circle.

[17] H. Hahn's edition of *The Paradoxes of the Infinite* will follow in 1920.

[18] We have offered a French edition of this Twardowski text (Fisette and Fréchette 2007, pp. 343–385) and have translated "Funktionen und Gebilde" by "Fonctions et formations" ("Functions and Formations") following the indications given by Twardowski himself, who borrows these terms from Carl Stumpf.

24.4 The Creation of the Vienna Circle and the Annexation of the Society to the Kant-Gesellschaft

A third important aspect regarding the relationship between the Philosophical Society and the members of the Vienna Circle pertains to the relationship established by Stadler (1997, p. 248), Uebel (1999, p. 260, 2000, p. 142), and Blackmore (2001b, pp. 257–258) between the Society's annexation to the Kant-Gesellschaft in 1927 and the creation of the Ernst Mach Verein, and then of the Vienna Circle in 1929. The connection between these two events has been established on the basis of an anti-Kantian attitude that is often attributed to the Austrian members of the Vienna Circle, and their willingness to create an association founded on a philosophical program that reflects the spirit of the Austrian tradition in philosophy. We believe indeed that there is a strong connection between these two events, but we do not believe that the Philosophical Society's annexation to the Kant-Gesellschaft represents by itself a sufficient motive to explain both the withdrawal of the Vienna Circle's Austrian members from the Philosophical Society and their willingness to create a distinct group. Other issues must be taken into consideration in order to explain this decision, particularly political and ideological issues which are intimately related to the Austrian tradition in philosophy.

24.4.1 Reininger and the Philosophical Society

One of the important pieces of this puzzle is the philosopher Robert Reininger, who presided over the Philosophical Society after Höfler's death in 1922 until its disbandment in 1938. This appointment occurred in the context of major transformations in the Viennese philosophical landscape which can be compared to those that marked Brentano's departure from Vienna and Mach's appointment the same year, as well as appointment of the anticlerical F. Jodl and his antidote, the theologian, L. Müllner in 1896. After the death of Adolf Stöhr in 1921, the Philosophy Department was left with no full professor. The following year, the Faculty of Philosophy proceeded to hire three new full professors, including Reininger, who already held a position in Vienna, and two German philosophers who were already established, Moritz Schlick and Karl Bühler. The contribution made by Schlick to the philosophy of logical empiricism is well known, but that of Bühler to the psychology and the philosophy of language is less, and it is important to know that after the death of Brentano, Meinong, Kreibig, and Höfler, Bühler is the one who best represented the Brentanian tradition in Vienna (Cf. Mulligan 1997). As for Reininger, he is one of the rare students of Zimmermann and, as such, he is the exception that proves the rule, as he is one of the rare proponents of Kantianism, as shown by most of his publications that promote the Kantian view of the world (Cf. Nawratil 1969).

24.4.2 The Annexation of the Society to the Kant-Gesellschaft

First, we must remember that Reininger became a member of the Philosophical Society at the turn of the twentieth century and that he quickly rose in the ranks of this organization's hierarchy: Under the presidency of Jodl, with whom he maintained strong ties, he held from 1904 the position of secretary and, from 1906–1912, the position of the Society's vice-president. Thus, his nomination as president of the Philosophical Society in 1922 went without saying as it ensured continuity in the history of the organization. But were we aware that this epigone of Kant would carry out many actions that were detrimental to the Society, of which he himself had not measured all the consequences? For, under the presidency of Reininger, the Society underwent many major transformations that altered most of the characteristic features that we attributed to it at the beginning of this study. Indeed, the list of conferences and discussions held at the society between 1922 and 1938 indicates that Reininger, in practice, abolished the discussion meetings, which, as we saw, represented the cornerstone of this society. The number of conferences given by non-philosophers was considerably reduced, which implied the renouncement of the interdisciplinary vocation of the Society, or at least its democratic nature. Reininger also abandoned projects that were cherished by his predecessors, mainly that of the Bolzano Commission.[19] Actually, the sum of these measures and other actions carried out by Reininger and his students led to a situation whereby this society could no longer be differentiated from many of the other groups affiliated to the Kant-Gesellschaft. The logical step regarding this degenerating phase in the Society's history was its annexation to the Kant-Gesellschaft. This was carried out in 1927 as confirmed by a report published the same year in the *Kant-Studien*:

> On November 18, 1927 was held, under the presidency of Professor Robert Reininger in Vienna, the general meeting of the "Philosophical Society" during which the "Philosophical Society", to the request of the commission, was acknowledged as a local group of the Kantian Society. From now on, it will bear the title of "Philosophical Society of the University of Vienna", local group of the Kantian Society in Vienna. ("Bericht", *Kant-Studien* 1927, Bd. 32, p. 556)

The same report however also indicates that the administrative board of the Society, which issued this decision, was comprised among others of K. Bühler, M. Schlick, and R. Meister, who held Höfler's pedagogy chair since the latter's death. This means that even if this initiative most likely came from Reininger, he was supported by many members and especially by his three colleagues, Schlick, Bühler, and Meister, with whom moreover he maintained ties of friendship (Cf. Nawratil 1969). Furthermore, we know that Bühler, like Schlick, published on a few occasions in the *Kant-Studien* (Cf. Schlick 2008; Bühler 1926, 1933) and that Schlick, like many other members of the Vienna Circle, regularly delivered conferences at the Kant-Gesellschaft as well as at the Philosophical Society, even following its

[19] We can state as proof the publication of the four volumes of Bolzano's Wissenschaftslehre in 1929 by W. Schultz, a former member of the Bolzano Commission; an edition that does not mention the Society by name (Cf. B. Bolzano 1929).

annexation. Therefore, whether they were involved in the decision that led to the Society's annexation to the Kant-Gesellschaft, Bühler and mostly Schlick had in principle no reason to oppose it.

The same cannot be said of the Austrian members of the Vienna Circle, who had witnessed the golden age of this society in which they were involved for more than 20 years. There is good reason to believe that they did not welcome with indifference the news of the Society's annexation to the Kant-Gesellschaft. Evidence of this is suggested by the fact that Neurath, Hahn, Frank, and Zilsel did not deliver one single conference at the Philosophical Society after 1927. Is this all a matter of coincidence? According to the historians of the Vienna Circle mentioned earlier, not only is it not a coincidence but also the Society's annexation would be at the source of Neurath's efforts to establish a discussion group that would be distinct from the Philosophical Society. In his autobiography, Karl Menger reports that Schlick had received with some reservations Neurath's project of founding the Ernst Mach Circle by recalling the existence of the Philosophical Society:

> As the academic year [1928–1929] went on and Carnap got more radical, Neurath got more excited and aggressive. When the idea of spreading the new insights uppermost in his mind, Neurath suggested that a society (*ein Verein*) for the promotion and propagation of a scientific view of the world be founded and named after Mach**.** "We have the Philosophical Society", Schlick protested […]. But Neurath easily convinced Hahn and Carnap that this was not enough. […] The Verein would start its activities with some public lectures in 1928–1929. Schlick was not altogether happy. But Neurath was on the warpath. (Menger 2009, p. 81)

This testimony offered by Menger sheds light particularly on the issue of the disagreement regarding the question as to whether the Philosophical Society still represented a suitable venue for the future members of the Vienna Circle to freely discuss the philosophical issues that were of interest to them at the time. Neurath was convinced that this was not the case, and our thesis is that his reasons were not foreign to his connection to this specifically Austrian philosophical tradition that he puts forth in his 1935 opuscule. This is what we would now like to examine.

24.4.3 Reininger's Motives: His Kantian View of the World

What explains the withdrawal of the members of the Vienna Circle from the Society's activities and Neurath's willingness to create a distinct entity is maybe less the Philosophical Society's annexation to the Kant-Gesellschaft than the motivations behind this turnaround. Indeed, in another report on the Philosophical Society, this time published in the *Kant-Studien*, Reininger explains his motives a little more clearly. The first concerns precisely the very idea of an Austrian philosophy, of which he disputes the existence in the name of a particular pan-Germanic philosophy:

> When we had decided, two years ago, to become a local group of the Kantian Society, this decision was born out of the high esteem that we held for the greatest philosophical association in Germany and the aspiration to formally join the great community of all German friends of philosophy. This community has actually always existed: there is not and has never been a specifically Austrian philosophy for which I should account, but only a German philosophy in which we, Austrians, participate. (Reininger 1930, p. 16)

This is a rather surprising assertion coming from a philosophy historian and a privileged witness to the development of philosophy in Austria. This can be seen as a form of denial on the part of the president of the Philosophical Society, but there is much more to this decision. This is confirmed by the subsequent passage in which Reininger informs us that the *Anschluß* (the annexation) of the Philosophical Society to the Kant-Gesellschaft was achieved in the name of an ideal that he attributes to all his compatriots:

> In this respect, the annexation to the *Kant-Gesellschaft* also held special symbolic significance for us. Of course, philosophy is not a national matter, but concerns humanity as a whole. But for us, Austrians, this close alliance with the greatest association of German philosophers represents more than a simple community of practical work. It is primarily a testimony to our inseparable spiritual and cultural belonging to the German people and therefore not only a simple question of convenience, but more importantly still, it represents a little step on the path of the realization of an ideal that is alive in all Austrians. (Reininger 1930, p. 16)

Reininger does not yet state what this ideal is, but simply asserts that the Society's subordination to an organization that promotes the "great German philosophers" is an expression of a cultural and spiritual belonging to the German people as a whole. But in other writings, notably in his conference in honor of the 200th anniversary of the birth of Kant and in another text published that same year under the title "Kant and the German Culture" (Cf. Reininger 1924), Reininger indicates unequivocally that this ideal is nothing other than the Kantian world view that he attributes to the *Großdeutschland,* and that the realization of this ideal, of which the Society's *Anschluß* to the Kant-Gesellschaft constitutes the first step, must necessarily be carried out by means of Austria's *Anschluß* to Germany. It should therefore come as no surprise that Austria's annexation to Germany in 1938 was, for this proponent of the *Großdeutschland,* the realization of a dream long cherished (Cf. Nawratil 1969, pp. 69–70).

24.4.4 Es gibt eine spezifisch österreichische Philosophie

Although Reininger's remarks are purely ideological, and that as such, they serve no historiographical value, we can nevertheless draw a few valuable conclusions from them. First, by establishing an opposition between, on the one hand, the Kantian worldview and the Kant-Gesellschaft and, on the other, the Philosophical Society and a specifically Austrian philosophy, Reininger undoubtedly supposes that, for many philosophers that belong to his generation, the Philosophical Society was to philosophy in Austria what the Kant-Gesellschaft represented for the Kantian tradition in Germany. Secondly, the proposition "*es gab und gibt keine spezifisch österreichische Philosophie*" does not only follow from positing the existence of a pan-German Kantian philosophy but also aims to discredit the dominant philosophical tendencies in Austria since Bolzano, as well as the many initiatives carried out to promote these ideas within this respectful institution. The Bolzano Commission is exemplary in this respect. Neurath's initiatives as well as his remarks on the

prehistory of the Vienna Circle are specific reactions and responses to these actions carried out in the name of Kantian worldview. This is also the case for most of the historical writings of the Society's members following its annexation to the Kant-Gesellschaft. For want of demonstrating this, we will restrict ourselves to a number of general remarks that go in this direction.

In the preface of his book *Between Physics and Philosophy*, P. Frank also opposes the Austrian philosophical tradition to the Kantian world view of German philosophy, which seems to echo the ideology conveyed by Reininger and his acolytes:

> The European movement had its origin in the ideas of the Austrian physicist Ernst Mach. At the beginning of the twentieth century it had a large following in the scientific circles of Austria, especially in Vienna and Prague. In spite of the common German language, this movement could find only a few adherents in the universities of the German Reich, because there the philosophy of Kant and his metaphysical successors reigned, being regarded as a world picture particularly suited to the German nation. (Frank 1941, p. 6)

In all of the historical writings of the Austrian members of the Vienna Circle, including those of V. Kraft, we find this twofold concern which consists of distinguishing oneself from this Kantian worldview and asserting a connection to the Austrian philosophical tradition. And, as Neurath recalls (1935, p. 38), the Kantianism advocated by Reininger is a late option that appears in the history of philosophy in Austria. Neurath's remarks are confirmed by two long-standing members of the Philosophical Society, who serve as privileged witnesses to the evolution of philosophy in Austria after the death of Zimmerman, that is, Heinrich Gomperz and Carl Siegel, who both wrote a short history of philosophy in Austria. Siegel, a student of Jodl who latterly converted to idealism, and of whom we will not therefore accuse of "Kant-bashing," does not hesitate to speak of a specifically Austrian philosophy whose characteristic feature since Bolzano is objectivism (Siegel 1930, p. 48). Gomperz is less categorical than Siegel or Neurath, but he does ask the right question in an article in which he recounts the history of philosophy in Austria during the years of the Philosophical Society's existence:

> It is not easy to say whether any common and specifically "Austrian" features may be detected in all these approaches. What is clear, however, is that a perpetual exchange of ideas as well as of persons has been going on between Austria and the rest of Germany and that, if Austria has been richly fertilized by the great currents of German intellectual life, it has amply repaid its debt by itself contributing to these currents in a measure that ought never to be overlooked. (Gomperz 1936, p. 311)

The general diagnostic offered here by Gomperz reflects the one found in most of the historical writings from Zimmerman up to Neurath, that is, the empirical orientation that is specific to this tradition. This is as well the diagnostic offered by Victor Kraft in his account of the history of the Vienna Circle:

> Thus there has existed a long tradition of empiricist philosophy in Vienna, concerned primarily with the natural sciences. But even before that time empiricist tendencies had in a sense asserted themselves through Franz Brentano. (Kraft 1953, p. 3; cf. also Kraft 1952)

According to this perspective, logical empiricism can be understood as the natural development of this Austrian philosophical tradition, which it also radicalizes as Neurath explains in his 1935 book.

24.5 Final Remarks

One of the objectives of this study was to examine the role of our institutions in the transmission of a tradition during a given period. We have insisted more particularly on the importance of the Philosophical Society of the University of Vienna in transmitting and preserving this typically Austrian tradition in philosophy, and we have shown that it is partly responsible for creating the Vienna Circle. It is important however to distinguish the institutional aspects of this society and the issues that were at the heart of the Philosophical Society, as it served as a philosophical discussion forum in which were addressed various questions that were of interest to the Austrians and the Viennese at the time. We have barely scratched the surface of the rich content contained in some of the 600 conferences and discussion meetings that marked the history of the Society during the 50 years of its existence. In this respect, some of the writings mentioned in the beginning of this study give an idea of the scientific value and historical importance which this philosophical forum represented. In addition, as a forum that brought together the great Viennese intellectual figures, the Philosophical Society provides us with a specific framework, with its structure and its rules, as well as a philosophical perspective that differs from those adopted in the many writings on *fin de siècle* Vienna, which focus on topics such as the failure of liberalism, decadence, identity crisis or yet therapeutic nihilism, as exemplified by W. M. Johnston's classical book *The Austrian Mind* (Johnston 1983).[20] This perspective also allows us to avoid the pitfalls of a backward history of philosophy as advocated by certain historians of the Vienna Circle, who tend to see in the Austrian philosophical tradition nothing other than a Vienna Circle in the making or, to borrow Husserl's well-known expression, its secret aspiration.

With respect to the ideological dimension of this institution, our scope was limited to Reininger's efforts to subordinate the Philosophical Society to an organization, which at the time, promoted the "great German philosophers." We showed that the reactions elicited by this decision demonstrate that the Philosophical Society was not considered as an organization simply among others by Austrians. As we have indicated at the beginning of this study, if we take into account the circumstances that led to the foundation of this organization and the significant involvement of Brentano and his students in the administration and activities of the Philosophical Society, it appears that this organization did not strictly represent for them a neutral discussion forum. The conferences delivered by Brentano in Vienna before his departure for Switzerland contain valuable information about the projects that he conducted for the Society but also philosophy in general in Austria.[21] But destiny

[20] A number of texts brought together by S. Beller (2001) discuss the various perspectives endorsed by historians of turn-of-the-century Vienna.

[21] But we also need to know that after his departure, in 1895, Brentano's name no longer appears in the Society's annual reports and, contrarily to most members of the Society, his death in 1917 was not mentioned in any of the annual reports, nor any of the meetings of the Society. We should note however that A. Kastil delivered three conferences on Brentano in 1934, 1936, and 1938. Brentano's correspondence shows however that he kept himself informed of the Philosophical Society's activities after 1895 and that he was aware of the controversy surrounding his succession in Vienna.

decided otherwise and, as we have also indicated, it was Robert Zimmerman who, due to his academic situation among other things, took matters into his own hands. A number of sources indicate that there were tangible tensions between Zimmerman and Brentano, particularly in an annual report published on the occasion of the 25th anniversary of the Society, which reveals that the source of these conflicts lay in the monopoly of Herbart's philosophy in Austria since Count Leo Thun's reform and of which Zimmerman was the main representative since his arrival in Vienna:

> Since the reform of high schools and higher education institutions in 1850, Herbartianism was the official philosophy in Austria as was Hegelianism in Prussia at the time. Nevertheless, in the decade during which our society was founded, such a monopoly became increasingly anachronistic. Directly in line with this transition phase, there were so to speak two poles, Zimmerman, on the one hand, Franz Brentano and his many students, on the other. (Jahresbericht 1912–1913, p. 6)

This polarization revealed itself in many forms within the Philosophical Society, most notably in 1889 during a conference given by Zimmerman on Herbart's psychology, which Brentano criticizes at length in his correspondence with Zimmerman (Zimmermann 1889).

But the sworn enemy of Brentano and his students in Vienna was the Bavarian philosopher Friedrich Jodl, who was president of the Philosophical Society between 1903 and 1912. Jodl is mainly known for his work in ethics, his edition of the works of Feuerbach as well as being the founder of the Ethical Society (Cf. (Jodl 1916) Börner 1911). He also made himself known during his presidency at the Philosophical Society for his involvement in the Klimt Affair, which was examined earlier, his well-known polemic with Boltzmann,[22] and his maneuvers against Brentano and his students. His situation is incidentally tied to Brentano's students: He obtains a position in Prague in 1884 as C. Stumpf's replacement and becomes the colleague of A. Marty and T. Masaryk, two other students of Brentano; afterwards, he receives an appointment as Zimmerman's replacement in 1896 in Vienna, and he himself is replaced in Prague by another of Brentano's student, that is, C. von Ehrenfels. As pointed out by Höfler in his autobiography, at the time of his departure from Prague in 1896, Jodl made it his mission to eradicate what he called the "Brentanoids" from the Austrian planet and thus intensified his efforts to break the monopoly held by the students of Brentano in the Austrian universities. In his correspondence with Bolin and in a long letter addressed to Breuer, the anticlerical Jodl describes Brentano's

[22] This polemic occurred in 1905 during a conference delivered by Boltzmann on Schopenhauer in a meeting of the Society. The original title of Boltzmann's conference was "Proof that Schopenhauer is a Stupid, Ignorant Philophaster, Scribbling Nonsense and Dispensing Hollow Verbiage that Fundamentally and Forever Rots People's Brains." Blackmore (1995, p 253) summarizes this polemic as follows: "In the discussion afterwards Jodl valiantly defended the great pessimist and regretted that Boltzmann had been hired to teach philosophy, since it had been under the false impression that he would bring physics and philosophy closer together. In fact, Jodl argued that if life is as painful as Schopenhauer maintained then suicide was legitimate as was using philosophy to justify such a negative act. Boltzmann replied that if Jodl wanted to commit suicide then he should do it, but that he could never prove it was rational. As is well known, Boltzmann himself committed suicide the next year, that is, in September 1906." We know through his correspondence with Brentano, with whom he was close during this period, that it was Brentano that convinced him to modify this title and to bring important changes to his text.

students as a provincial clique made up of priests or former priests who promote a liberal theology (Cf. Gimpl 1990, pp. 46–47). Jodl increased his efforts within and outside the Philosophical Society to break what he also called the "Brentano system." Finally, we should note that Jodl could rely on other opponents of Brentano within the Society, particularly L. Müllner, A. Stöhr, and mostly W. Jerusalem who intensified the attacks on Brentano.[23]

Our examination of the Philosophical Society of the University of Vienna was limited to a few aspects of the relationship that we can establish between this organization and the Vienna Circle. Our ambition was simply to call attention to the significance of this institution within the history of philosophy in Austria, as Zimmermann, Brentano, Jodl, Reininger, and Neurath all recognized in their own way. Many other aspects of this remarkable organization deserve an in-depth examination, not only with respect to the Austrian philosophical tradition but also regarding the many scientific disciplines that underwent astonishing developments during the 50 years of the Society's existence. For, as an organ of the Faculty of Philosophy and because of its interdisciplinary nature, the Philosophical Society was a privileged witness to the discussions that marked the evolution of disciplines such as psychiatry and psychoanalysis (the numerous debates about sexuality, for example), zoology (the dispute over Darwinism represented one of the most important debates within the Society), physiology and physiological psychology (with Mach, Hering, a number of colleagues from the Department of Medicine, Brentano, and most of his students), physics (debates on classical mechanics and the theory of relativity with Höfler and most of the members of the Department of Physics), economics, sociology, ethics, history of art, musicology, etc. This is why the Philosophical Society represents an important resource with respect to the study of what is commonly referred to as *fin de siècle* Vienna.

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[23] This is confirmed by W. Jerusalem (1925, pp. 1–35) in a few passages of his autobiography, which were removed from the official version published by R. Schmidt in 1922.

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Chapter 25
La noción del valor en la filosofía de Meinong

Íngrid Vendrell Ferran

Abstract Aunque la figura de Meinong se asocia a posiciones realistas acerca de los valores, un análisis más cuidadoso de su obra revela al menos tres concepciones diferentes de esta noción. El objetivo de este artículo consiste en examinar sistemáticamente las tesis acerca de los valores sostenidas en tres de sus obras. Se analizará primero la teoría disposicionalista defendida en *Psychologische ethische Untersuchungen zur Werttheorie* (1894) según la cual los valores son posibles sentimientos de valor. Centraremos después nuestra atención a los cambios realizados en "Über Werthaltung und Wert" (1895), obra en la que se explica el concepto de valor relacionándolo con los conceptos de emoción y deseo. Finalmente, nos centraremos en las tesis realistas expuestas en *Emotionale Präsentation* (1917) y mostraremos la actualidad de las mismas para el debate contemporáneo.

Keywords Meinong · Realismo del valor · Teoría disposicional del valor · Emoción · Deseo

25.1 Introducción

La figura del pensador austríaco Alexius von Meinong se asocia a posiciones realistas acerca de los valores. Sin embargo, un análisis más cuidadoso de su obra revela al menos tres concepciones diferentes esta noción. En este artículo me propongo presentar las diferentes tesis acerca de los valores defendidas por Meinong en tres de sus obras. En *Psychologische ethische Untersuchungen zur Werttheorie* de 1894 defiende una posición filosófica cercana al disposicionalismo según la cual el valor se identifica con el sentimiento de valor.[1] Sólo un año después, en 1895, en "Über Werthaltung und Wert" presenta Meinong una segunda versión de su tesis acerca del vínculo entre valores y emociones que incluye importantes modificaciones al otorgar un papel fundamental a los deseos. En 1917 en *Emotionale Präsentation* calificará Meinong ambas tesis como psicologistas y las abandonará

[1] En este texto voy a usar los conceptos de "sentimiento" y de "emoción" como sinónimos.

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definitivamente apostando por una posición realista. El objetivo de este artículo consiste en examinar en detalle estas tres tesis y en valorar la actualidad de la tercera teoría de Meinong para el debate contemporáneo.

25.2 Los valores y los posibles sentimientos de valor[2]

En 1894 expone Meinong su primera teoría acerca de los valores en *Psychologische ethische Untersuchungen zur Werttheorie*.[3] Esta teoría puede clasificarse como subjetivista, pues, en ella se identifica el valor con el sentimiento de valor ("Wertgefühl") (Schumann 2001a, p. 518; 2001b, p. 542). Años más tarde Meinong va a revisar esta teoría y él mismo en *Emotionale Präsentation* la designará como "psicologista" reemplazándola por una posición "realista" en cuanto a los valores (Meinong 1923, p. 148, Meinong 1968a, p. 147).

Ya en esta primera teoría, Meinong vincula los valores con las emociones. Este vínculo entre ambos fenómenos seguirá a lo largo de toda su obra aunque será entendido de modo diferente en cada etapa de su pensamiento. Podemos afirmar por ello que las diferentes teorías de los valores sostenidas por Meinong a lo largo de su obra así como sus evoluciones están en una relación de dependencia con sus teorías de las emociones y viceversa.

En la primera teoría formulada por Meinong en 1894 el concepto de valor está fuertemente influenciado por la teoría económica del valor de Menger (*Gründsätze der Volkswirthschaftstlehre*, 1872) y por la filosofía moral de Brentano a cuyos seminarios sobre filosofía práctica había asistido entre 1875 y 1876.

En este período Meinong tiene un concepto de valor muy general, el cual abarca valores económicos, éticos y estéticos. Su propia posición la desarrollará primero *ex negativo*, es decir distanciándose y criticando dos concepciones alternativas acerca del valor: el *subjetivismo* y el *absolutismo* de los valores. El *subjetivista* acerca de los valores afirma que tiene valor aquello a lo que otorgo un valor. Por tanto, el valor de un objeto consiste en el ser tenido por valioso. Así afirma Meinong: "Valor lo tiene para mi aquello que tengo por valioso; el valor de un objeto consiste, por tanto, en ser tenido por valioso" (Meinong 1968b, p. 24).[4] Esta posición tal y como la define Meinong resulta similar a ciertas concepciones emotivistas desarrolladas durante el pasado siglo XX según las cuales los valores son proyecciones de nuestros estados anímicos en el mundo.

En contra el subjetivismo de los valores proporciona Meinong dos potentes argumentos. Por un lado, resulta posible que atribuyamos valor a algo que en realidad no lo tiene. Por otro lado, algo puede tener un valor y, a pesar de ello, es posible que

[2] En lo que sigue voy a traducir "Werthaltung" como "actitud de valor".

[3] Ehrenfels en su publicación „Werth-Theorie und Ethik" se expresaba en contra de Meinong, lo que obligó a este a publicar la obra y posicionarse en el debate antes de tener una versión acabada de su teoría. Por ello, en más de una ocasión Meinong hace alusión al carácter provisional de su tesis (Meinong 1968c, 387).

[4] Original: „Werth für mich hat, was ich werthhalte; der Wert eines Gegenstandes besteht sonach im Wertgehalten-werden."

no lo contemplemos como valioso (Meinong 1968b, pp. 24, 67). Dado que podemos equivocarnos en atribuir un valor o podemos pasar por alto valores, los valores no pueden ser proyecciones de nuestros estados anímicos en el mundo. El subjetivismo de los valores resulta, por tanto, según estas consideraciones meinongianas poco o nada convincente.

La segunda posición es el *absolutismo* de los valores según el cual los valores son absolutos. También esta posición es según Meinong vulnerable. Así, afirma este autor que: "la existencia de un valor no está menos ligada a la existencia de determinadas propiedades en el sujeto que a la existencia de tales propiedades en el objeto" (Meinong 1968b, p. 72).[5] En este sentido habla Meinong de una doble relatividad de los valores: en relación con un sujeto que tiene determinadas disposiciones a sentir (Meinong 1968b, pp. 30, 27) y en relación con un objeto (Ibid, pp. 67, 71) que tiene determinadas propiedades las cuales pueden evocar una emoción en el sujeto. Así, los valores "cambian, surgen y se desvanecen del mismo modo en que las "disposiciones en cuestión" en el sujeto cambian, surgen y se desvanecen" (Ibid.).[6] Tampoco el absolutismo de los valores representa para Meinong –en el período en el que formula su primera teoría– una alternativa viable pues los valores son relativos tanto a los objetos en los cuales nos son dados como a los sujetos que están dispuestos a captarlos.

Frente a estas posiciones defiende Meinong una tesis alternativa. Esta tesis afirma que los valores no están ligados a las *actitudes de valor efectivas*, sino a las *actitudes de valor posibles* ("mögliche Werthaltungen"). Meinong escribe:

> el valor no está vinculado con la actitud de valor actual, sino con la actitud de valor posible, y también se deben considerar para ésta aún circunstancias favorables, la orientación específica suficiente así como un estado espiritual y anímico normal. El valor consiste, por ello, no en el ser tenido por valioso, sino el poder ser tenido por valioso bajo la condición de que se den las circunstancias necesarias. Un objeto tiene valor en tanto que tiene la capacidad de ser fundamento efectivo de un sentimiento de valor en aquel que, en caso de que sea normal, esté orientado hacia él de modo suficiente. (Meinong1968b, p. 25).[7]

El valor consiste, por tanto, en la posibilidad de ser tenido por valioso en caso de que las circunstancias sean favorables y el sujeto se encuentre en un estado anímico e intelectual no anómalo. Con ello, se hace referencia a las dos condiciones necesarias para que se den los valores: que las circunstancias sean favorables y que el sujeto se encuentre en condiciones de poderlo sentir. En lo que sigue no me interesa tanto entrar en la discusión acerca de esta doble condición para que se den los valores como centrarme en uno de los aspectos fundamentales de la definición ofrecida

[5] Original: „die Existenz eines Werthes nicht weniger an die Existenz bestimmter Eigenschaften im Subjecte als an die Existenz solcher im Objecte gebunden ist (…)."

[6] Original: „verändern, entstehen und vergehen, so wie die „betreffenden Dispositionen" im Subjecte sich verändern, entstehen und vergehen."

[7] Original: „nicht an die actuelle Werthhaltung ist der Werth gebunden, sondern an die mögliche Werthhaltung, und auch für diese sind noch günstige Umstände, näher ausreichende Orientirtheit, sowie normaler Geistes- und Gemüthszustand in Anschlag zu bringen. Der Werth besteht sonach nicht im Werthgehalten-werden, sondern im Werthgehalten-werden-können unter Voraussetzung der erforderlichen günstigen Umstände. Ein Gegenstand hat Werth, sofern er die Fähigkeit hat, für den ausreichend Orientierten, falls dieser normal veranlagt ist, die thatsächliche Grundlage für ein Werthgefühl abzugeben."

por Meinong en el citado párrafo. De este párrafo se deduce que bajo el rótulo de "actitudes de valor posibles" ("mögliche Werthaltungen") entiende Meinong una disposición del sujeto a sentir. En esta concepción, los valores son comprendidos como disposiciones del sujeto a captar determinadas propiedades en un objeto y a reaccionar afectivamente frente ellas (Meinong 1968b, pp. 81, 93). Podemos hablar por tanto de que en esta fase Meinong es un disposicionalista acerca de los valores. Al tratarse de una disposición estamos ante un fenómeno condicionado individual, histórica y culturalmente y que además se puede aprender (Schumann 2001a, p. 519). Las disposiciones dependen tanto del sujeto como del objeto y muestran con ello una doble relatividad.

Si atendemos a la naturaleza concreta de estas "actitudes de valor" ("Werthaltungen"), vemos que Meinong las comprende como "sentimientos" ("Gefühle") (Meinong 1968b, p. 15). Con esta posición se distancia de Ehrenfels, pues para este autor el valor consiste en un "ser deseado" ("Begehrt-werden"). En contra de la posición de Ehrenfels proporciona Meinong los siguientes argumentos: primero, ocurre a menudo que podemos considerar algo como valioso y, en consecuencia, lo podemos desear. En este caso, es sólo después de considerar algo como valioso que surge el deseo y no a la inversa. Aquí estamos ante un caso en el que se sigue el orden exactamente inverso al propuesto por Ehrenfels, ya que para este autor primero deseamos algo y luego le otorgamos valor.

El segundo argumento en contra de Ehrenfels consiste en la posibilidad de considerar algo como valioso y, sin embargo, no sentir ningún deseo por ello.

El tercer argumento consiste en que el deseo siempre se dirige a algo que no está dado, pero que muchas veces otorgamos valor a cosas que nos son presentes o que incluso ya poseemos. (Ibid, pp. 15–16).

En base a estos tres argumentos sostiene Meinong que las actitudes de valor ("Werthaltungen") no pueden reducirse a deseos. Frente la posición de Ehrenfels prefiere Meinong la alternativa según la cual las actitudes de valor ("Werthaltungen") se comprenden mejor como sentimientos de valor ("Wertgefühle"). Así pues, en 1894 la tesis defendida por Meinong es que los *valores* están estrechamente vinculados a *sentimientos de valor.* Este vínculo no puede entenderse, sin embargo, ni como una mera proyección en el mundo de los posibles sentimientos de valor, ni como una reacción a valores ya dados. Más bien los valores están constituidos en una interacción entre determinadas propiedades del objeto y las correspondientes disposiciones del sujeto. En esta fase, los valores según Meinong son—de una manera que quedaba aún por determinar– experimentados por un sentimiento de valor y este sentimiento de valor—al igual que todos los sentimientos que tenemos– origina por definición en el sujeto una vivencia de placer o de desplacer.

25.3 Valor, emoción y deseo

La tesis que hemos expuesto anteriormente acerca de los valores que Meinong defendió en *Psychologische ethische Untersuchungen zur Werttheorie* será revisada sólo un año más tarde. En 1895 en „Über Werthaltung und Wert" modifica Meinong

su tesis original en tres puntos decisivos. Tampoco en esta obra nos ofrece Meinong una versión definitiva de su teoría de los valores, de modo que esta versión de su teoría de los valores expuesta en 1895 deberá considerarse al igual que la anterior como provisional y transitoria.

La primera modificación concierne una tesis defendida en 1894 según la cual la magnitud de un valor depende de la intensidad del sentimiento de la actitud de valor ("Werthaltungsgefühl") (Meinong 1968b, p. 73, 1968c, p. 328). Según esta tesis cuando algo me produce una gran alegría, le atribuyo entonces un valor de gran magnitud. En contra de su propia tesis inicial, Meinong aporta ahora en esta nueva obra contraejemplos para demostrar que la magnitud de un valor no depende de la intensidad de la actitud del valor. Así, como nos muestra un primer contraejemplo, resulta posible atribuir un gran valor a una amistad, sin que sea por ello necesario que la actitud de valor se vivencie con gran intensidad. Un segundo contraejemplo para desbancar la tesis de 1894 es el siguiente: Si atendemos al valor que una persona en plena salud y una persona enferma otorgan a la salud, vemos que éste último confiere mucho más valor a la salud que el que está sano, pero esto no significa que la salud no tenga para la persona sana ningún valor. De estos dos contraejemplos deduce Meinong que la magnitud del valor no depende de la intensidad del sentimiento de valor, sino que más bien es una función del mismo.

La segunda gran modificación respecto de su tesis anterior concierne el concepto mismo de valor. En 1895 Meinong define el valor como un fenómeno vinculado al sentimiento de valor, el cual afecta tanto a la existencia como a la no existencia de un objeto (Meinong 1968c, p. 337). Con ello, aplica el concepto de valor también a la no existencia de objetos.

La tercera modificación concierne a que para poder comprender los valores precisamos necesariamente de juicios.

Meinong se ve impulsado a realizar estas tres modificaciones a raíz de las tensiones que lleva consigo la tesis inicial de 1894 según la cual los valores son actitudes de valor posibles. Con estas tres modificaciones se apunta a una progresiva desvinculación del concepto de valor respecto de los sentimientos del sujeto.

La propuesta que hace Meinong en „Über Werthaltung und Wert" resulta interesante en comparación con la tesis defendida solamente un año antes, ya que ahora Meinong propone explicar el concepto de valor no a partir del concepto del sentir, sino del desear. Según esta nueva propuesta el valor sería la capacidad de un objeto de afirmarse como objeto de deseo. Así afirma Meinong: "El valor de un objeto representa la fuerza de motivación que se confiere a este objeto tanto en virtud de su propia naturaleza como de la constitución de su entorno y del sujeto en cuestión" (Meinong 1968c, p. 341).[8]

Esta nueva tesis se asemeja a la tesis que Meinong mismo en 1894 ha atribuido a Ehrenfels, pues este autor vincula fuertemente los valores con los deseos. Sin embargo, a pesar de esta similitud afirma Meinong que los sentimientos—y no los deseos— son el elemento esencial que caracteriza el valor (Meinong 1968c, p. 341).

[8] Original: „Der Wert eines Objectes repräsentiert die Motivationskraft, die diesem Object vermöge seiner eigenen Natur wie vermöge der Beschaffenheit seiner Umgebung und der des betreffenden Subjectes zukommt".

Estas modificaciones y la tesis resultante deben entenderse como provisionales. Pues, tampoco esta propuesta de 1895 va a resultar satisfactoria para Meinong. En 1917 en *Emotionale Präsentation* presenta aún una tercera solución para el problema de los valores. En esta tercera solución valores y sentimientos están relacionados el uno con el otro, aunque no puede hablarse de una relación de identidad.

A pesar de las tensiones inherentes a estas dos primeras teorías de los valores y de su carácter provisional, las tesis de Meinong encontraron gran eco entre sus discípulos y fueron retomadas en los escritos de Alois Höfler (Höfler 1897), Wilhelmine Liel (Liel 1904) y Stefan Witasek (1907). En especial Liel desarrolla en „Gegen die voluntaristische Begründung der Werttheorie“ (Liel 1904) una serie de tesis en la dirección de los primeros escritos de Meinong y en contra la tesis “voluntarista de los sentimientos”, es decir, en contra de aquellas posiciones que intentan explicar los valores mediante los conceptos de deseo y de volición como, por ejemplo, Ehrenfels y Schwarz. La crítica de Liel a Ehrenfels sigue las líneas de la crítica realizada por Meinong a Ehrenfels en 1894. Más interesante, resulta en este texto la confrontación entre Liel y Schwarz. Este autor había desarrollado una teoría similar a la de Ehrenfels, la cual intentaba explicar los valores como hechos de la volición (“Wollungstatsachen”). Estos últimos deben ser entendidos como una especie de deseo o volición y Schwarz los calificaba como un “agrado” (“Gefallen”) (Liel 1904, p. 528). Después de un análisis detallado de la naturaleza de este „agrado“ de Schwarz llega Liel a la conclusión de que el agrado a penas puede diferenciarse de los sentimientos (*Ibid*., p. 573). En esta analogía ve Liel un argumento a favor de las tesis desarrolladas por Meinong en 1894 según la cual los valores están vinculados a sentimientos de valor y se experimentan como vivencias de placer o desplacer. Así, esta autora, fuertemente inspirada por Meinong, afirma que los sentimientos de valor consisten en un conocimiento (“Wissen”) acerca de los valores, el cual proporciona placer o desplacer.

25.4 Los valores y la función cognitiva de los sentimientos

1917 en *Emotionale Präsentation* Meinong expone una teoría de los valores que se diferencia de las dos posiciones defendidas anteriormente por su radical realismo.[9] Según esta nueva concepción los valores existen con independencia de los sentimientos de valor y de los deseos. La tesis de Meinong en esta fase realista no es que los actos emocionales sean constitutivos para los valores, sino que tiene una función cognoscitiva respecto de estos: Los valores son captados por medio de actos emocionales.

En el mencionado texto Meinong intenta diferenciar las emociones de los deseos con la intención de distanciarse de las posiciones sostenidas por Ehrenfels y Brentano. Algunos de los argumentos en contra de la tesis de Ehrenfels que entiende los

[9] Otros autores de su tiempo van a defender también posiciones realistas acerca de los valores. La más representativa de estas posiciones es la defendida por Max Scheler en su Ética (Scheler 1954).

sentimientos como deseos ya fueron desarrollados en su texto de 1894. Meinong afirma ahora que: no se siente porque se desea, sino que se desea precisamente porque se siente. Es decir, que el sentir antecede al desear. Esta tesis es significativa, pues, Meinong entiende a los sentimientos como temporal y lógicamente anteriores a los deseos (Meinong 1923, p. 135). En contra de la polémica tesis sostenida por Brentano en su *Psychologie vom empirischen Standpunkt* según la cual entre emociones y deseos sólo existía una diferencia gradual (Brentano 1959), sostiene Meinong que la diferencia entre emoción y deseo no es sólo una diferencia de grado, sino de esencia, a pesar de que pueda existir un vínculo muy estrecho entre ambos fenómenos. Este distanciamiento de Ehrenfels y de Brentano resulta importante para aclarar la propia teoría de Meinong en relación con el papel de los sentimientos y los deseos. Para Meinong las emociones preceden a los deseos y los motivan.

Tras posicionarse a este respecto, Meinong analiza la función de los sentimientos. Acorde con este autor, las emociones tienen una función "cognitiva": son las encargadas de presentar los valores (Meinong 1968a, p. 114). Las emociones tienen según Meinong objetos específicos: "En general: Si P es el objeto presentado por la emoción p, entonces está justificado vincular la emoción p con el objeto A, en caso de que P corresponda a A de modo que el juicio "A es P" esté justificado" (Ibid, pp. 130–131).[10] Los sentimientos tienen, por tanto, objetos propios hacia los cuales se dirigen intencionalmente de un modo esencial. Estos objetos propios son los valores. Esto significa que un valor concreto que está dado en un objeto, se nos "presenta" por medio de la emoción correspondiente. Así, por ejemplo, la propiedad axiológica de lo asqueroso, se presenta por medio de la emoción del asco; del mismo modo en que la propiedad axiológica de lo peligroso nos es dada en la emoción del miedo. Aquí las emociones se comprenden como un sentir el valor y su función cognitiva consiste precisamente en presentar los valores.

Una implicación importante de esta tesis es que las emociones nos transmiten información sobre el mundo. Ellas son las responsables de que el mundo no se presente de modo neutral, sino como un horizonte con cualidades a partir de las cuales nos podemos orientar. Algunos contemporáneos de Meinong compartieron la idea de que las emociones tienen la función cognitiva de presentar los valores. Por ejemplo, Stein y Kolnai afirmaban que las emociones captaban los valores (E. Stein 1917, pp. 109–110, 112; A. Kolnai 1974, p. 128, 166, 1998). Otros autores como Scheler, Geiger y Ortega y Gasset afirman que las emociones son respuestas a los valores, pero que los valores son captados en actos del sentir (M. Scheler 1954, p. 271; M. Geiger 1974, p. 8; J. Ortega y Gasset 1966, pp. 325, 328, 331). Es decir, que el sentir es un acto cognitivo que capta los valores, pero que en sí no es una emoción.

Para explicar la función presentadora de las emociones Meinong trabaja con una analogía ilustrativa entre sentir y percibir (Meinong 1923, p. 133, 1968a, pp. 32, 118, 129). Del mismo modo en que en el percibir, se nos presentan propiedades e

[10] Original alemán: „Allgemein also: ist P der durch die Emotion p präsentierte Gegenstand, dann ist, an den Gegenstand A die Emotion p zu knüpfen, berechtigt, falls P dem A tatsächlich zukommt, somit das Urteil „A ist P" im Rechte ist".

informaciones, lo mismo ocurre en el caso del sentir. Ahora bien hay una diferencia entre emociones y percepciones por lo que concierne el momento de captación de información ("Erfassen"). Cuando captamos algo se nos transmite una información. En la percepción se captan objetos de un tipo determinado, pero en los actos emocionales la captación de los valores no es—según Meinong– completa. Es importente hacer hincapié en este punto: Para poder hablar de una captación auténtica, las emociones precisan de actos intelectuales. Las emociones son demasiado subjetivas y precisan de juicios y de percepciones para poder cumplir con la función de captar los valores (Meinong 1923, p. 137).

Esta correlación entre el valor y la emoción así como la capacidad de las emociones de captar los valores (aunque esta capacidad sea limitada y precise siempre de una base cognitiva) abre la posibilidad de que las emociones dispongan de condiciones de verdad (Meinong 1923, p. 136, 1968a, p. 12). En virtud de su función presentadora las emociones merecen un lugar destacado como medio de conocimiento y en virtud de su vínculo con los valores se puede hablar de emociones justificadas y emociones injustificadas ("berechtigte und unberechtigte Emotionen") (Meinong 1968a, 129). Según esta última tesis las emociones se parecen a los juicios, pues al igual que éstos pueden ser correctos o falsos, las emociones pueden estar justificadas o injustificadas. ¿Cuando es una emoción justificada? La respuesta de Meinong es que podemos considerar una emoción como justificada cuando se cumplen dos condiciones. Primero, tiene que ser apropiada en respecto de los objetos que presenta, es decir, que el miedo debe dirigirse a lo peligroso, el asco a lo asqueroso, etc. En segundo término, la justificación de una emoción también depende de los actos intelectuales—básicamente juicios y percepciones– que tiene por base. Para que el miedo pueda considerarse una emoción justificada debe, por lo tanto, dirigirse a lo peligroso y, además, debe basarse o en un juicio como, por poner aquí un ejemplo, el juicio de que la jaula en la que está encerrado el animal salvaje no es segura y estoy en peligro; o en la percepción de una tormenta que se avecina. Sólo cuando se cumplen ambas condiciones puede hablarse de emociones justificadas. En la filosofía contemporánea de las emociones encontramos tesis similares defendidas por autores analíticos de corte cognitivista (e.g. Kenny 1963, p. 194; de Sousa 1987, p. 159, por citar aquí sólo algunos).

Vemos, pues, como Meinong trabaja con la doble analogía entre emociones y percepciones, por una parte, y emociones y juicios, por otra, a fin de explicar su naturaleza y de relacionarlas con los valores.

Las tesis descritas anteriormente tienen fuertes implicaciones éticas, a las que me gustaría hacer referencia aunque fuera sólo muy brevemente. La pregunta crucial que da punto de partida a las reflexiones éticas es, como ya indicó Kant, la pregunta por "¿Qué debo hacer?" A esta pregunta el kantismo y el utilitarismo han respondido con el desarrollo de un sistema de normas. Aquello que se debe hacer viene determinado por normas, prohibiciones y obligaciones. En contraposición a estas posiciones, Brentano desarrolló una tesis alternativa según la cual lo que se debe hacer viene determinado por nuestra capacidad de sentir. Son nuestras emociones las que nos muestran lo que tiene un valor y lo que no. Las emociones funcionan como base para la voluntad. Muchos de los jóvenes estudiantes de Brentano se

sumaron a este proyecto ético, entre ellos estaba Meinong. Las tesis de Meinong acerca de los sentimientos como motivos de la voluntad y la tesis sobre los sentimientos como percepciones de valores deben considerarse en este contexto. Meinong afirma que en el campo de la ética no se debería desarrollar preceptos acerca del obrar y del querer (Meinong 1968b, p. 224), pues su tarea principal consiste más bien en tematizar la naturaleza de los valores y el modo en como éstos son captados por las emociones.

25.5 Actualidad de la teoría realista de Meinong acerca de los valores

En este apartado voy a mostrar la actualidad de las tesis de Meinong, especialmente las tesis que hacen referencia a su fase realista acerca de los valores. Muchos autores contemporáneos defienden una tesis similar a la tercera teoría de Meinong de los valores y de cómo tenemos acceso a ellos. Ronald de Sousa (1987), Christine Tappolet (2000) y Mark Johnston (2001) son algunos de los autores que en las últimas décadas han desarrollado teorías de los valores y su vínculo con las emociones que se asemejan en gran manera a la tesis defendida por Meinong en *Emotionale Präsentation*. Entre los tres autores mencionados ha sido Tappolet quien ha desarrollado su teoría en explícita vinculación con el trabajo realizado por Meinong. Así afirma esta autora que las emociones son percepciones de valor: "quand les circontances sont favorables, nos emotions fournissent un accès cognitif fundamental aux valeurs. (…) Nos emotions pourraient donc étre qualifiées de perceptions des valeurs" (Tappolet 2000, p. 8–9). Cuando las circunstancias son favorables—dice esta autora usando la misma cláusula que antes había usado Meinong—las emociones tienen una función cognitiva que consiste en revelarnos los valores. También encontramos en el trabajo de esta autora la doble analogía entre emociones y percepciones y emociones y juicios, que ya apuntada por Meinong.

En un sentido similar Mark Johnston postula la tesis de que las emociones revelan valores. Así afirma este autor:

> (…) it is because affect can be the disclosure of the appeal of other things and other people that it can have authority in the matter of what we should desire and do. By "the authority of affect" I mean not to refer to its sheer effectiveness as a source of desire or action, but rather to the fact that the presence of the affect can make the desire or action especially intelligible to the agent himself. It can make the desire or act seem apt or fitting in a way that silences any demand for justification (…). In this way affect is akin to perceptual experience considered more generally. (Johnston 2001, p. 189).

Johnston habla de la "autoridad de los sentimientos" en el sentido de que aquello que se nos presenta en la vivencia emocional es una determinada cualidad del mundo de la cual no podemos dudar.

Ambos autores defienden, por tanto, la función cognitiva de las emociones como las encargadas de presentarnos valores y, en consecuencia, de que el mundo se nos presente como un entramado pintado de matices en el que nos orientamos y

tomamos posición, y en el que unas cualidades nos resultan más visibles que otras gracias a la existencia de lo emocional.

Frente a estos autores y en diálogo con ellos, encontramos hoy en día defendida también una posición semejante a la que en su momento desarrolló Max Scheler y a la cual ya hemos hecho alusión. Así, Mulligan argumenta en contra de la tesis defendida por Meinong en *Emotionale Präsentation* y por los autores contemporáneos citados anteriormente según la cual las emociones son un sentir el valor (Mulligan 1998, Mulligan 2004). Dos de los argumentos más potentes en contra de la tesis de las emociones como percepciones de valor desarrollados por Mulligan son, primero, el argumento según el cual no siempre que captamos un valor, tenemos una emoción. Muchas veces podemos percatarnos de la injusticia de una situación sin por ello precisar de una emoción para captar este valor. Además un valor puede estar vinculado a diferentes emociones de modo que no podemos hablar de una correlación unívoca entre emociones y valores (Mulligan 2004). La tesis alternativa propuesta por este autor consiste en distinguir entre "sentir" y "sentimiento". El sentir tendría la función de revelarnos los valores mientras que los sentimientos serían una reacción posible a este sentir del valor.

Para concluir podemos decir que el estudio de la noción del valor en la filosofía de Meinong no es sólo interesante desde el punto de vista de la historia de la filosofía sino que puede arrojar luz a muchas de las cuestiones vigentes en la filosofía contemporánea acerca de la función cognitiva de las emociones, del papel jugado por éstas en la ética y de su vínculo con los valores.[11]

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[11] En este texto se amplian algunas ideas presentadas en: Vendrell Ferran, Íngrid: "Meinongs Philosophie der Gefühle und ihr Einfluss auf die Grazer Schule". En: Meinong Studien III, Ontos, Graz 2009.

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Chapter 26
Austrian and Hungarian Philosophy: On the Logic of Wittgenstein and Pauler

Barry Smith

Abstract As Kevin Mulligan, more than anyone else, has demonstrated, there is a distinction within the philosophy of the German-speaking world between two principal currents: of idealism or transcendentalism, characteristic of Northern Germany, on the one hand; and of realism or objectivism, characteristic of Austria and the South, on the other. We explore some of the implications of this distinction with reference to the influence of Austrian (and German) philosophy on philosophical developments in Hungary, focusing on the work of Ákos von Pauler, and especially on Pauler's reading of Wittgenstein's *Tractatus*.

Keywords Austrian philosophy · Wittgenstein · Lukács · Picture theory of meaning

26.1 Austrian Philosophy

In a series of extraordinarily fertile essays (cf. Mulligan 1981, 1986, 1989, 1993, 2001, 2006a, 2006b, 2011a, 2011b, 2012), Kevin Mulligan has demonstrated not merely that there is a distinction within the philosophy of the German-speaking world between the transcendentalism of the North and the realism of the South (comprising, roughly, Bavaria and the Habsburg lands) but also that paying attention to this distinction can yield fruitful consequences for our understanding of twentieth-century philosophy in general and of the rise of analytic philosophy in particular.

It would of course be going too far to suggest that there is any one system of thought properly to be called "Austrian philosophy" which would unite all of those thinkers, from Bolzano and Wittgenstein to Gödel and Popper, born within the frontiers of the Austro-Hungarian Empire. It is however clear that there are certain tendencies which these philosophers exhibit to varying degrees, tendencies which set them in contrast to their Northern contemporaries in something like the way in which (for example) those who read Musil (or Kafka) are set apart from, say, admirers of Thomas Mann.

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First, there is the *tendency to realism,* reflecting the fact that the Kantian revolution was not, on the whole, accepted in Catholic Austria. Austrians such as Bolzano (referred to in laudatory fashion as "the anti-Kant" by his pupil Příhonský; cf. Příhonský 2003) are distinguished by their striving for ontological adequacy and by their readiness to admit entities of different sorts on their own terms and not to seek to dismiss them as creatures of reason or of language. Mulligan (1995) refers in this connection to the Austrian "descriptivist tradition" comprising "Bolzano, Brentano, Ehrenfels, Pfänder, Stumpf, Meinong, Witasek, Baley, Husserl, Orestano, Geiger, Bühler, Musil, Kolnai, Katkov, Köhler, Kunz, Duncker and especially…Scheler (not to mention minor figures who drew extensively on this tradition such as Heidegger and Sartre)." (Oddly, he does not mention also the Poles, Ingarden, and Wojtyła, the latter born in 1920 in the former crown land of Galicia and Lodomeria as the son of a former career officer in the Austrian Imperial and Royal Common Army; cf. Wojtyła 1979.)

Second, there is a recognizable *method* of doing philosophy in Austria, and a recognizable *style* of philosophical writing. Austrians sought to develop philosophy as a rational enterprise, often taking the natural sciences as their model, typically employing a language which is, by comparison to that of their North German counterparts, marked by a concern for logical clarity and by a ploddingly pedantic concern for exactness and comprehensiveness (see Mulligan 1990). Many Austrian philosophers are distinguished by the fact that they employed an aprioristic method distinguished from that of Kant in that it rested on a commitment—best illustrated by the writings of Husserl's early disciples in Munich and Freiburg—to the existence of a broad range of synthetic a priori truths, embracing domains such as perceptual psychology, ethics, aesthetics, and law. And we can recognize also a powerful strain of methodological individualism—a concern to understand macrophenomena in terms of the individual mental experiences which underlie or are associated with them (cf. Grassl and Smith 2010)—where Germans turn, instead, to larger social wholes, and to speculative history à la Marx or Hegel.

We can also point to certain characteristic types of *problem* dealt with by Austrian philosophers. In particular, we can note that the Austrians are often at one with Anglo-Saxon philosophers in awarding a central place in their work to the problems of logic and of the philosophy of science (cf. Smith 1996).

That the above is not an empty characterization is seen by observing how rarely the mentioned features are manifested in the works of the principal philosophers of *Reichsdeutschland*. The latter are marked, to varying degrees, by hostility to science, by the running together of philosophy, politics, and religion, by a blindness to logic, and by the privileging of style over substance. Obvious exceptions, leaving aside mathematicians in Jena or Göttingen, were all too often, as in the case of Stumpf, heavily influenced by figures central to the Austrian tradition.

One illustration of these last two points is the extraordinarily impressive and influential philosophy of the social sciences (and of economics in particular) set out by Carl Menger (cf. Menger 1981, 1985), founder of the Austrian school of economics whose most conspicuous twentieth-century adherent was F. A. Hayek (a relative of Wittgenstein, and—as an accident of his family connections—one of the

first to read the *Tractatus*: cf. Hayek 1992). One primary foil of Menger's economic writings is the historical approach to economics of the German school, and specifically of Gustav Schmoller (Menger 1884). (It was Schmoller who coined the name "Austrian school" as part of an attempt to sully Menger and his followers with the taint of provincialism.) Menger's philosophy of exact laws is a striking counterpart of the philosophy of exact laws in the philosophy of mind underlying Brentano's descriptive psychology (see Grassl and Smith 2010).

26.2 From Austria to Hungary

Philosophy in Poland, and in the Czech lands, too, shows a marked influence of the Austrian tradition. In Hungary, however, philosophers have drawn their primary inspiration not from Austria but from the Germany of Kant and Hegel. One reason for this, as pointed out by Somos (1995), was the tendency on the part of ambitious young scholars in Hungary to pursue their studies abroad. (This precluded Austria as a place of study since Austria was precisely *not abroad*.) Another reason was that Vienna, in contrast to (say) Berlin, was not seen as a center of scientific research. Hungarians preferred Germany because that was where real science was done.

And finally Hungary, like Ireland, was facing problems on the nation-building side. Many young Hungarian aspirant thinkers thus felt the urge to associate themselves with the tradition that had brought forth Romantic nationalist figures such as Fichte and Herder. Austria, like England, had little need for a philosophy of this sort.

Given the political and constitutional turmoil faced by Hungarians in the nineteenth and twentieth centuries, "philosophical interest in questions of practical relevance seems," as Demeter puts it,

> quite natural and sheds light on the traditional contrast in intellectual history between "contemplative Austrians" and "activist Hungarians". This strong interest in social and political questions prepares the ground, as it were, for the emergence of a philosophy with characteristic sociological affinities. (Demeter 2008)

And as Demeter makes clear, many Hungarian philosophers are not merely caught in a sociological tradition of writing philosophy; when they write on the history of philosophy, too, they often use the sociological approach, for example, when attempting to understand divisions such as that between, for example, German and Austrian philosophy (cf. Nyíri 1988).

Yet, there are also exceptions to the rule which tilt Magyars in the direction of German philosophy. The role of Bolzanian logic in the grammar school textbooks of Kakania in effect divided Austro-Hungarian philosophers with an interest in the philosophical foundations of logic into two schools: those like Twardowski, Meinong, or Husserl, who *accepted* Bolzano, and those who *rebelled,* thereby becoming, as Nyíri (1999) puts it, "anti-Platonists, conscious of the role of language and communication in cognitive processes."

The former group is illustrated, in Hungary, by the nineteenth-century school of Bolzanians led by Jenö Enyvvári and Béla Fogarasi, and also, from 1909 to 1914, by some of the members of the BENBE circle (see Somo 1999),[1] to which also the young György Lukács belonged. Perhaps the most interesting Hungarian case among the latter is Melchior Palágyi (1859–1924), a philosopher, mathematician, and physicist prominent especially for his innovative four-dimensionalist views on space and time, similar in some ways to those of Poincaré and Minkowski.

Of concern to us here are the three remarkable books, *Kant und Bolzano* (1902a), *Der Streit der Psychologisten und Formalisten in der modernen Logik* (1902b), and *Die* Logik auf *dem Scheidewege* (1903), published by Palágyi between 1902 and 1903. All three were inspired, in one way or another, by the appearance of Husserl's *Logical Investigations* in 1900/1901. *Der Streit,* indeed, was reviewed by Husserl, who objected to Palágyi's suggestions that he had failed in the *Logical Investigations* to give due credit to Bolzano (cf. Husserl 1994, p. 201). As Claire Hill points out, Husserl makes clear in his review of Palágyi that, while he had initially believed that Bolzano's doctrine of *Sätze an sich* involved an appeal to abstruse metaphysical entities,

> in the 1890's it all of a sudden became clear to Husserl that Bolzano had actually been talking about something fundamentally completely understandable, namely the meaning of an assertion, what was declared to be one and the same thing when one says of different people that they affirm the same thing. This realization demystified meaning for Husserl (See Hill 1995).

Palágyi himself, in his *Kant und Bolzano*, criticizes Bolzano for neglecting the degree to which *language* is the medium of thought, so that the idea of propositions or meanings in themselves represents an incoherent dualism (see Nyíri 1999). The counterpart view—that meaning (*Meinen*) is necessarily bound up with an expression—is enunciated also by Reinach (1911), as Mulligan himself points out, in a passage from "Getting *Geist*" (*loc. cit.*) which also refers to Palágyi:

> When phenomenologists, early and late, clamour that the introduction of "thingly" categories into the description of mind is an error which has catastrophic consequences, the positive alternative analysis they have in mind is that given by Reinach (and, first of all, by the Hungarian philosopher, Palágyi).

[1] As Somos points out, one result of the rising interest in Husserl's *Logical Investigations* among those involved in the debates on neo-Kantianism in Hungary in this period, was that

> the so-called Austrian line of the German-speaking philosophy became more interesting for Hungarian philosophers than earlier. At the same time, among the followers of the new idealism, only few adopted the strongly anti-Kantian position of Brentano and Bolzano. The members of the new generation, Béla Zalai, Béla Fogarasi, Vilmos Szilasi, Károly Mannheim, György Lukács set high value on the results of the *Logische Untersuchungen* but they had such an established, ingrained preference for neo-Kantian philosophy of value or the sociological viewpoint of Georg Simmel, that they did not take up the position against psychologism criticized by Husserl.

As Mulligan also points out (2001, p. 2), Palágyi's distinction between punctual mental acts (for example, acts of meaning something with an expression, acts of willing) and temporally extended experiences such as are involved in seeing or hearing or worrying about something anticipates a large number of related distinctions in twentieth-century philosophy—in Klages, Scheler, and Wittgenstein, as well as in Reinach.[2]

26.3 Ákos von Pauler

The principal object of our investigations here, however, is not Palágyi but his near contemporary Ákos von Pauler (1876–1933). Like Palágyi, Pauler was deeply impressed by Bolzano's arguments for the depsychologization of logic, and he came to see Bolzano as the beginning of a revolution in philosophy culminating, through Brentano, in the work of Husserl and especially of Meinong.

Pauler's allegiances did not always lie with the philosophy of Austria. As a student in the 1890s, he had embraced the positivism of Comte and Spencer, which he later saw as being allied to the thinking of Wundt and Fries. From there he moved on to become a Kantian of the Rickert school and absorbed the writings of Hermann Lotze—Lotze's philosophy of *Geltung* perhaps laying the seeds of the full-blooded Platonist philosophy of logic which was to follow later. It was around 1905 that the truly decisive influence—that of the writings of Bolzano and Husserl—occurred. While Pauler's general philosophy remained predominantly Kantian until around 1909–1910, he began, in his philosophy of logic, to work toward a conception of what he called "pure logic," as a discipline which concerns itself exclusively with mere relationships of validity among propositions and thus has nothing to do with acts of a substance-like ego of any sort—including the hyper-individual ego favored by the Kantians.

Studies on Meinong from around 1909 led Pauler to further clarify his views in this matter, and Pauler came to see Meinong's theory of objects as having this advantage over Husserl's new phenomenological ideas: that it removes the "intuitive element" (cf. Somos 1995, 601). Pauler's logic henceforth has much in common with Meinongian *Gegenstandstheorie.*

In 1910, Pauler spent 2 months in Florence visiting Brentano,[3] and after a period as professor of philosophy in Kolozsvár (Klausenburg, Cluj), he was appointed to a chair in Budapest in 1915, by which time he had fully developed his

[2] Even philosophers such as Béla Zalai who stood on the fence between the pro- and anti-Bolzanian camps were marked in their thinking by essential methodological elements taken over from the Austrian tradition. Thus, Zalai's general theory of systems is influenced by Ehrenfels's ideas on Gestalt qualities and also by Husserl's third *Logical Investigation* "On the Theory of Wholes and Parts." See B. A. Banathy (1989), and Smith (1987).

[3] We can infer that it was in his discussions with Pauler in this period that Brentano remarked that "Bolzano's work exerted a significant influence on his own thinking, but that the traces of this influence are to be found not so much in his own essays, but in the world of thought of his students,

characteristically Austrian philosophy of logic—incorporating along the way a heavy dose of the thought of Aristotle and of that "Leibnizian vision of harmony" which W. M. Johnston saw as the characterizing mark of the Austrian mind (cf. Johnston 1983). By this stage, Pauler officially held Kant's thought to be of value only as a carrier of the Aristotelian tradition, and certainly within his theory of pure logic Pauler is absolutely free from the taint of Kantianism.

26.4 Pauler's Logic

By the 1920s, Pauler has established himself among his contemporaries as the foremost Hungarian philosopher. This period saw the publication of his two principal works translated into German: the *Grundlagen der Philosophie* 1925 and the *Logik* of 1929.[4] The latter, particularly, rings heavily with the thought of Bolzano. The object-domain of logic Pauler conceives as the totality of truths in themselves or *Wahrheiten*. This domain is ruled by principles which others might well call metaphysical, and which include, beyond the laws of identity, contradiction and excluded middle, also the "laws" of connection (everything is connected with everything else), classification (everything can be classified), and correlativity (there is nothing relative without an absolute).

The ontological status of truths in themselves is distinct from that of the real objects and events of the material world; truths enjoy, rather, a mode of existence which Pauler (following Lotze) calls *Gültigkeit* or validity. That which enjoys *Gültigkeit* (*besteht* or subsists, in Meinong's terms) is atemporal, thus unchangeable, and incapable of bringing about effects in other things. It is independent of all mental acts of thinking subjects and would exist even in a world entirely denuded of such subjects. Thus, Pauler's *Wahrheiten* closely resemble Bolzano's *Sätze an sich,* though since, for Pauler, falsehoods have no *Gültigkeit*, there are no false *Sätze an sich* in the Paulerian ontology. This is almost the only significant difference between Pauler's and Bolzano's conceptions of the province of logic, and we can note that a similar preferential treatment of the true can be found among other Austrian realists, such as Meinong and Marty (cf. Smith 1990).

The locus of the false, for Pauler, lies not within the ideal sphere of *Gültigkeit,* but rather within the factual realm of human judgments. Each actually executed judgment constitutes an approximation to one or more propositions in the realm of truths in themselves; false judgments are distinguished by the fact that the degree of approximation is maximally small.

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especially Husserl." See Pauler, "F. Brentano 1837–1917," *Athenaeum* 1918, 4, pp. 73–78; cited from Somos, op. cit, p. 598.

[4] Both published by de Gruyter, who produced also a memorial volume, *Gedenkschrift für Akos von Pauler*, ed. L. Prohászka, 1936, in which especially the papers by J. H. Nagy ("Der Platonismus Paulers," pp. 107–116), J. Somogyi ("Die Idee der Wahrheit in der Philosophie Paulers," pp. 142–150), and B. Bencsik ("Die Ideologie Paulers," pp. 151–166) are of importance. Pauler also published one further volume in German: his *Aristoteles*, Paderborn: Schöningh, 1933.

For Pauler, as for Wittgenstein in the *Tractatus,* the totality of *Wahrheiten* is conceived as forming a system. It is the object of pure logic to investigate the structure of this system on the one hand, and to determine the relationship between the system and the world, on the other.

26.5 Pauler and the Picture Theory

Wittgenstein's own account of this relationship draws on a distinction among propositions between the elementary and the logically complex. The former Wittgenstein conceives as *pictures* of states of affairs, in the sense that to each constituent simple object in a state of affairs there corresponds a constituent of the corresponding (true) elementary proposition. The two sets of constituents are said to stand in a relationship of projection, one to the other, and it is this purely structural account of the pictorial relation ("*abbildende Beziehung*") which exhausts Wittgenstein's treatment of the relation of elementary proposition and state of affairs:

> The representing relation consists of the co-ordinations of the elements of the picture and the things. (2.1514)

There is, notoriously, something mysterious here, since we are told nothing of the nature of these two different kinds of "*Elemente*." Things are made no better when logically complex propositions, too, are brought into play, since Wittgenstein's account of the relation between such propositions and the world presupposes his account of the relation between an elementary proposition and its corresponding state of affairs and adds nothing of substance to this account. Wittgenstein gives us no indication of the natures either of simple objects or of the simple constituents of elementary propositions to which these would correspond.[5]

Similar picture theories of the relation between propositions and states of affairs can be found in the writings of a number of Austrian philosophers from Bolzano to the Husserl of the *Logical Investigations*. Adherence to a correspondence theory of truth is indeed one of the most important characterizing marks of the anti-Kantianism of the Austrians.

Pauler goes further than Wittgenstein, however, in attempting to give some positive—which is to say not merely structural—account of the relationship in question. He introduces a new term, "*logisma*" (see Pauler, *Logik* (*op. cit.*), 62 ff.), to designate the ultimate constituents out of which truths are composed. The *logisma*

[5] What applies to the constituents of the elementary proposition applies also to the constituents of its psychological correlate, the thought:

> I don't know what the constituents of a thought are but I know that it must have such constituents which correspond to the words of Language. Again the kind of relation of the constituents of the thought and of the pictured fact is irrelevant. It would be a matter of psychology to find out. (Letter to Russell, from *Letters to Russell, Keynes and Moore*, Oxford: Blackwell, 1974, p. 72)

is the atom of the discipline of logic. It is thus contrasted with entities in the reality to which the truth relates on the one hand, and with the knowledge act in which the truth is grasped psychologically on the other. Like Bolzano's *Vorstellung an sich,* it is introduced as part of an attempt to remove the ambiguity underlying the traditional concept of concept (or *Begriff*) as between a logical content and a product of a mental operation.

The *logismata* which make up a true proposition stand to things in the world in what Pauler explicitly refers to as a "mirroring relationship"—the word "thing" being understood widely enough to comprehend objects, properties, and relations, and both concrete particulars and universals in the world around us.

To understand in more detail Pauler's account of the relationship of picturing, it will be necessary to say a few words about the traditional theory of logic against which Pauler, like Bolzano before him, reacted, but from which both also drew their inspiration. According to this traditional theory, the subject matter of logic is the totality of judgments (understood not as ideal entities related together in an atemporal, ideal system, but as concretely existing mental entities). The constituents of a judgment are conceived as ideas or concepts in the mind of the judging subject at a given moment and the judgment is conceived as a binding together, in thought, of a plurality of concepts.[6] Where Frege, for example, had rejected this traditional theory by arguing that logic has no business at all with the bare and fleeting ideas or *Vorstellungen* which inhabit people's minds, Pauler adopted a more lenient view. He recognized, first of all, that there is a proper place for a discipline which would investigate, from a logical rather than a psychological point of view, the properties of our thinking acts. He insisted only that this discipline be acknowledged as an *applied* logic; it is not identical to, because it presupposes, the discipline of *pure* logic, which is concerned exclusively with the properties of the ideal system of *truths*. Pauler's principal charge against Aristotle and the traditional logicians was thus that they had confused the applied science of judgment with the pure logic of truth, and that they had failed to recognize the necessity of the latter as a precondition for the former. He did not hold that the traditional logicians had been confused in their view of the judgment as in some sense a complex of concepts; rather, he takes this account as the starting point of his theory of the *logismata,* and thus also of his theory of the relation between proposition and fact, but conceiving the *logismata* as something objective, forming a gigantic, relationally ordered system, from which the judging subject needs to make a kind of "selection" (cf. Pauler 1925, p. 264 f. Compare Somos, op. cit., 601).

Taking the individual concretely executed judgment as his starting point, as Pauler sees it, the logician carries out a process of idealization to arrive at the corresponding ideal truth in itself. The latter is something like a prototype of the former, from which every imperfection of content and all incompleteness and one-sidedness have been removed. Similarly, the *logisma* is an idealization of the concretely exist-

[6] Normally, we have to deal with a pair of concepts, the subject and the predicate. This "binding of concepts" theory of the judgment clearly faces severe difficulties when it is required to give an account of the negative judgment: cf. Reinach (1911).

ing concept, and if we can believe that we understand the relation between *concept* and thing, then we can extrapolate from this understanding in grasping the relation between *logisma* and thing. This will involve a combination of the Brentanian and Husserlian theories of intentionality—there is a directedness of *logisma* toward the thing—with Meinong's theory of objects—which for the first time provides, in Pauler's eyes, the means to do justice to the entire expanse of thought in embracing both what exists and what does not exist (cf. Pauler 1925).

Pauler's ontology of the logical can be conceived also as a refinement of the Platonic theory of ideas. The *logisma* is the platonic idea conceived as rooted in the system of truths in themselves, as the atom out of which this system is built. Where Plato had concerned himself almost exclusively with the vertical relationships between ideas and the world, Pauler lays the principal stress on the network of horizontal relationships among the ideas themselves. Where Plato is concerned with *Wesensforschung*—with the investigation of ideas or essences—Pauler is interested in the (logical) structure of the system of *logismata,* in the relations and connections between the ideas. This commitment to an ideal, eternal system of *logismata,* standing in an eternally established relation to the objects in the world, signals how far Pauler has traveled from his early commitment to positivism à la Comte, which consisted precisely in the denial of such a system. It signals also his departure—at least in his philosophy of logic—from any form of Kantianism, which sees the connection between logic and the world as dependent upon the *gesetzgebende Rolle der Vernunft* (roughly: on the law-giving role of reason; or the capacity of reason to compel reality to conform to its forms). For Pauler, as for the other Austrian logical realists, as for Leibniz before them, the existence of the Idea or *logisma* is a presupposition of the existence of the concept as this arises in the mind of the cognitive subject. Our grasping of the concept is itself an imperfect grasping of the Idea and grasping what is universal in this sense is as much a part of every experience as is the grasping of what is particular.

It is striking how many features of Wittgenstein's thinking on logic and meaning should be reflected in Pauler's *Logik,* which first appeared in its original Hungarian in 1925—which is to say some 5 years before Pauler can be presumed to have encountered Wittgenstein's work. While these parallels would be unintelligible were Pauler a product of the German philosophical tradition, they are of course perfectly understandable given the Austrian (Leibnizian, Bolzanian, Brentanian, Meinongian, Husserlian) background of his logical thinking. Or, to formulate the matter from the other direction: That Wittgenstein should have reproduced so many of the ideas that we find in Pauler provides yet further support for the central thesis of Mulliganism, since it can be explained only by pointing to the common (Austrian) heritage shared by the two philosophers.[7]

[7] In the case of Wittgenstein, in the simplest possible rendering, Meinongian ideas were absorbed through the mediation of his teacher Bertrand Russell. For the fuller account, see Kevin Mulligan (2009).

26.6 Pauler, Lukács, and the Jews

At a time when, outside small circles in Cambridge and Vienna, awareness of the existence of Wittgenstein's *Tractatus* was extremely rare, Pauler purchased or was presented with a copy of the work, and as we shall see he made a serious and sympathetic study of the text. The date inscribed by Pauler in the flyleaf of his copy (which is now in the possession of the present author) is 3 April 1930, 3 years before Pauler's death.

Before considering what might be the philosophical import of Pauler's reading of the *Tractatus,* we need to address the significance of his one nonphilosophical annotation, on p. 26 (the first page of Wittgenstein's "Preface"), which consists in the drawing of a Star of David together with the comment "moving modesty! Verecundia Judaica?" The annotation in question was inserted by Pauler in reference to Wittgenstein's assertion that "it is indifferent to me whether what I have thought has already been thought before me by another."

Schopenhauer (see *Parerga and Paralipomena,* vol. 2, § 132), Weininger (2005, pp 283, 289), and Scheler (1987, pp. 26, 73) all claimed that Jews lack *verecundia* (modesty, shame), and Weininger even thinks that this explains what he takes to be the absence of genius—as opposed to talent—among the Jews. Pauler's own relation to the Jews was a difficult one, and thus the significance of the mentioned annotation—almost certainly ironically intended—is not quite easy to understand. Suffice it to say that Pauler's attitudes were colored by the events of 1919, when Pauler was banished from the University of Budapest by the (mostly Jewish) leaders of the short-lived Hungarian Soviet Republic 8 days after the latter had seized power on March 21. Pauler was at that time a leading figure in the Council of the Faculty of Philosophy and a staunch defender of the autonomy of the university. His counterparts on the government side were, Zsigmond Kunfi, Commissar of Education from March 21 to June 24, and György Lukács, who served as Kunfi's Deputy and as People's Commissar for Education and Culture from March 21 to April 3. In its brief period of power, the Soviet government was responsible for murdering several hundred people, including many scientists and intellectuals. The government collapsed on August 1, when most of its members, including Lukács, fled to Austria (taking with them numerous art treasures and the gold stocks of the Hungarian National Bank). Pauler was reinstated on August 27.

Lukács is interesting in this connection not merely because he participated actively in acts of political thuggery but also because he sought to provide these acts with a moral justification. In his *Tactics and Ethics,* written shortly before the Communist takeover in 1919, he talks of political murder as an "imperative of the world-historical situation, a historico-philosophical mission." Citing the Russian novelist and terrorist leader Boris Savinkov, he goes on to point out that, while "murder is not allowed, it is an absolute and unpardonable sin," still

> it "must" be committed. …the ultimate moral basis of the terrorist's act [is] the sacrifice for his brethren, not only of his life, but also of his purity, his morals, his very soul. In other words, only he who acknowledges unflinchingly and without any reservations that murder is under no circumstances to be sanctioned can commit the murderous deed that is truly—and tragically—moral.

And as Lukács wrote in an article in the Hungarian newspaper *Népszava* on April 15, 1919: "Being now in possession of state power means that this is the moment to annihilate the former repressive classes. The moment is here, but we have to make use of it!"

Sadly, this thuggish, sometimes murderous, strain was to haunt philosophical life in Hungary in the subsequent decades, and its shadow lingers on even today through the continuing influence of some of Lukács' students. This explains at least in part why more rigorous Hungarian thinkers have had so little influence in their native land.

26.7 Pauler and the Tractatus

I shall have space here to provide further comment on only a small selection of the 70 or so philosophical annotations inserted by Pauler into his copy of the *Tractatus,* which are reproduced in English translation in the Appendix. They range from single words to complete sentences, supplemented by many marginal exclamations and question marks.

More pertinent, from a philosophical point of view, is the fact that the name "Aristotle" appears at a number of places in the margin of Pauler's copy of the *Tractatus,* particularly where the words "form" and "substance" are used by Wittgenstein. At,

> 2.021: Objects form the substance of the world. Therefore they cannot be compound.

Pauler claims to detect also—perhaps not so remarkably—the influence of Leibniz, another philosopher not without significance for the Austrian tradition. On the other hand, there is also evidence of some residual influence of Kant on Pauler in this reading of the *Tractatus*—though only at those points where Wittgenstein departs from the treatment of purely logical issues. For example, at 5.633, Wittgenstein asks, rhetorically:

> *Where in* the world is a metaphysical subject to be noted?

Pauler's wholly unsympathetic reply (translated by me here into German) is: *In der Vernunft!*

Opposite the remark, at 6.421, to the effect that "Ethics und aesthetics are one," Pauler accuses Wittgenstein of "journalistic shallowness," which is of course exactly the sort of criticism which Wittgenstein's hero Karl Kraus leveled against his contemporaries.

The overwhelming impression is that of an intelligent and careful reading, Pauler's most serious criticism of Wittgenstein as a logician being that he fails to live up to his own exhortations on the avoidance of "logical nonsense." And again, such a positive reception would be astonishing were it not for the shared Austrian background of the two philosophers.

26.8 Logical Principle and Mathematical Axiom

At the very end of his life, Pauler authored a paper entitled "Logical principle and mathematical axiom" (1936), the manuscript of which was published by his students after his death.[8]

As is clear from its title, Pauler addresses in this chapter the issue of the relation between mathematics and philosophy. Although it remained incomplete, the piece is of interest not least because it contains a number of critical passages on the work of Frege, for example, on Frege's definition of number in the *Grundlagen der Arithmetik* (§ 68), where Pauler notes that, while Frege's account has the merit of not taking the psychological phenomena of numbering or counting as its starting point, his definition of number yet suffers from the defect that it applies only to cardinal and not also to ordinal numbers. For Pauler, in contrast, a correct "definition of number must grasp the root from which both cardinal and ordinal numbers can be deduced," namely that a number is in every case "a member of the number series."

As concerns Wittgenstein, Pauler raises in this essay an objection that he also raises against Russell, namely that they both deny the possibility of philosophical knowledge as something distinct from knowledge of mathematical (logical, analytic) truths. At the same time, however, Pauler views Wittgenstein as the greater thinker on other grounds, namely because he brought about the most significant renewal of the modern theory of relations. Pauler's thinking can be seen, in this light, as in accord with Wittgenstein's picture theory of language. *Names,* for Wittgenstein, stand for *things,* and the arrangement of names stands for a *situation in reality*. Both names and arrangements thereby belong not to the psychological but to the logical realm—the realm of *logismata*. Pauler might have pointed out that, while Wittgenstein was successful in keeping separate the logical and the psychological realms, his use of the term "name," in this and related contexts, suggests that he failed to keep separate the logical from the *linguistic* realms, a failure which had, of course, tremendous significance for the subsequent development of analytic philosophy.

It will already be clear that there are many affinities between Pauler and Wittgenstein. Both see logic as the fundamental philosophical discipline; both defend an objectivistic view of propositions (in the spirit of Bolzano), which means that they both postulate, in addition to things and representations, a third realm of logical entities. Yet, Pauler and Wittgenstein differ greatly in the position they award to logic in relation to the other branches of philosophy. For Pauler, the principles of logic form the core of *philosophia perennis*—and for this reason, even though Pauler views the rise of modern symbolic logic as significant, he can find nothing to admire in it precisely because, through its invention of ever new logical systems, it gives the impression that *logic changes*.

Where for Wittgenstein, philosophical assertions belong to the realm whereof we cannot speak, for Pauler philosophical assertions are like other assertions—not least

[8] I draw heavily in what follows on Somos (2001, pp. 211–217).

in that they are subject, too, to the principles of logic. They do, indeed, involve a certain self-referential aspect—it is for this reason that skeptical theses are nonsensical—and this self-referential aspect is ineliminable. But this is a discovery about philosophical assertions, one that can be stated in other philosophical assertions, which are once again themselves subject to the principles of logic.

Further objections against Wittgenstein in "Logical principle and mathematical axiom" echo the marginalia referred to already above:

> It is a nonsensical statement on the part of Wittgenstein when he asserts that one cannot talk about the totality of things. (He does it himself, when he tells us of the totality of things that we cannot talk about it.)

Against Wittgenstein's refutation of the principle of causality, Pauler points out that

> Wittgenstein himself accepts this principle, for example when he wants to convince others of his point of view.

And as Pauler's annotation ("this he has achieved!") to Wittgenstein's remark on p. 27 to the effect that the object of this book "would be achieved if there were one person who read it with understanding"—Wittgenstein did indeed succeed in exerting this causal influence on at least one reader, namely Pauler himself.

Pauler objects also to Wittgenstein's treatment of the role of language in the *Tractatus*. He formulates his objection thus:

> Wittgenstein's main program is to find the limits of knowledge in language, in what can be linguistically expressed. Important parts of our mental experiences however are linguistically inexpressible, for instance feelings; yet still we affirm their existence and in a sense also we have knowledge of them. All of this is to misconceive the nature of language. Language evolved not for gaining knowledge, but for common action (*gemeinsame Handlung*). It is something social, not an instrument of the theory of knowledge. Wittgenstein's program diminishes the realm of knowledge to an unbelievably stark degree—it would for example exclude knowledge of the mental life. And by the way, there is also thinking without language (for example in children).

Pauler's use of the phrase "*gemeinsame Handlung*" ("*közös cselekvés*"), here, certainly has affinities with Wittgenstein's reference at *Philosophical Investigations* § 206 to the "*gemeinsame menschliche Handlungsweise*" as a reference system through which we interpret a strange language. But as Somos correctly points out:

> Pauler's philosophical position is of course far from the philosophy of language of the older Wittgenstein. [It] calls to mind rather Bolzano, who calls everyday language the "*Sprache des gemeinen Lebens*." (*op. cit*.)

For Pauler, indeed, the philosophy of language was a ludicrous one-sidedness (*irrsinnige Einseitigkeit,* Somos, *op. cit.*)—because of the degree to which it sought to banish the truly important logical and metaphysical problems from the realm of what philosophers shall be allowed to concern themselves with (cf. Mulligan et al. 2006).

Acknowledgments What follows is a revised and much expanded English version of my "Osztrák és magyar filozófia: Wittgenstein és Pauler logikájáról," *Magyar Filozófiai Szemle*, (1981/1), 139–144. I am grateful to Tamás Demeter, J. C. Nyíri, Róbert Somos, and Gloria Zúñiga y Postigo for helpful comments.

Appendix

Pauler's notes are to a copy of *Tractatus Logico-Philosophicus,* translated from the German by C. K. Ogden, with an introduction by Bertrand Russell, prepared with assistance from G. E. Moore, F. P. Ramsey, and Wittgenstein; a parallel edition included the German text on the facing page to the English text, Routledge and Kegan Paul, 1922.

	Passage referred to	Translation of Pauler's comments
p. 16	That the sun will rise tomorrow	Self-contradictory: he too builds his statements on the pr[ima] causa (that namely *tomorrow too* he will judge like this!!)
p. 17	It is impossible to say anything about the world as a whole	Naïve and self-contradictory nominalism!
p. 20	The psychological part of meaning… does not concern the logician	Right!
p. 23	To this hierarchy of languages there may be no limit	This is *certain*! (cf. Tarski.)
p. 26	It is indifferent to me whether what has been thought has already been thought before me by another	Moving modesty! Verecundia Judaica? [with penciled Star of David at top of page]
p. 27	[The object of this book] would be achieved if there were one person who read it with understanding	This he has achieved!
p. 29	If this work] has a value…this value will be better the better the thoughts are expressed	Alas, badly!
p. 29	The *truth* of the thoughts communicated here seems to me unassailable	no small achievement!
2.01	An atomic fact is a combination of objects (entities, things)	LHS: so the world does consist of things! RHS:? how come!
2.0121	A logical entity cannot be merely possible	"Merely possible" confused
2.0123	If I know an object, then I know all the possibilities of its occurrence in atomic facts	Good
2.0141	The possibility of its occurrence in atomic facts is the form of the object.	Aristotle
2.0201	Every statement about complexes can be analysed into a statement about their constituent parts	Russell

	Passage referred to	Translation of Pauler's comments
2.021	Objects form the substance of the world. Therefore they cannot be cannot be compound	Leibniz
2.023	The substance of the world can only determine a form and not any material properties	what is that?
2.0233	Two objects of the same logical form are…only differentiated from one another in that they are different	Diversitas
2.024	Substance is what exists independently of what is the case	Aristotle
2.0251	Space, time and colour…are forms of objects	through the mental?
2.062	From the existence or non-existence of an atomic fact we cannot infer the existence or non-existence of another	contradicts 2.0121, for if everything is connected, then surely one can infer from one to the other
2.17	What the picture must have in common with reality…is its form of representation	Aristotle
3.1432	We must not say, "The complex sign '*a R b*' says '*a* stands in relation *R* to *b*'"; but we must say "The '*a*' stands in a certain relation to '*b*' says *that aRb*"	Aristotle
3.333	…Herewith Russell's paradox vanishes	Right!
4	The thought is the significant proposition	But there is also languageless thought!!
4.11	The totality of true propositions is the total natural science	Are there then only natural sciences?
4.1272	Expressions like "1 is a number"…are senseless	Right!
4.128	Therefore there is no philosophical monism or dualism, etc	This is entirely unintelligible!
4.46	In the first case we call a proposition a tautology, in the second case a contradiction	Def
4.464	(Certain, possible, impossible: here we have an indication of that gradation which we need in the theory of probability.)	Excellent solution!
4.466	(And to no logical combination corresponds no combination of the objects.)	Contra Frege and Russell
4.5	The general form of proposition is: Such and such is the case	Right!
5.4	Here it becomes clear that there are no such things as "logical objects" or "logical constants" (in the sense of Frege and Russell)	What is that?
5.43	But all propositions of logic say the same thing. That is, nothing	Violence: he too explicates such propositions

	Passage referred to	Translation of Pauler's comments
5.454	In logic there cannot be a more general and a more special	Without giving reasons!
5.513	Two propositions are opposed to one another when they have nothing in common with one another	But there is no such thing
5.5151	The positive proposition must presuppose the existence of the negative proposition and conversely	Right!
5.524	LHS: If the objects are given, therewith are all objects also given	Right!
5.524	RHS: If the elementary propositions are given, then therewith *all* elementary propositions are also given	has nothing to do with the problem!
5.5303	To say of two things that they are identical is nonsense	Right!
5.533	The identity sign is therefore not an essential constituent of logical notation	Right!
5.5421	A composite soul would not be a soul any longer	Right!
5.422	The correct explanation of the form of the proposition "A judges p" must show that it is impossible to judge a nonsense	He does it too!!
5.552	The "experience" which we need to understand logic is not that such and such is the case, but that something is; but that is no experience	Right!
5.557	What lies in its application logic cannot anticipate	Clearly!
5.61	We cannot therefore say in logic: This and this there is in the world, that there is not	*Quite* right!!
5.62	That the world is my world, shows itself in the fact that the limits of the language (the language which only I understand) mean the limits of my world	I am *my world*? [in English]
5.621–5.631	The world and life are one I am my world. (The microcosm.) The thinking, presenting subject; there is no such thing	Contradiction
5.633	Where in the world is a metaphysical subject to be noted?	In Reason [margin:] naïve sensualism and empiricism
6.021	A number is the exponent of an operation	Right!
6.031	The theory of classes is altogether superfluous in mathematics	Contra Russell

	Passage referred to	Translation of Pauler's comments
6.111	This now by no means appears self-evident, no more so than the proposition "All roses are either yellow or red" would seem even if it were true	Confusing contrary with contradiction
6.112	The correct explanation of logical propositions must give them a peculiar position among all propositions	Right!
6.1231	To be general is only to be accidentally valid for all things	Not so
6.127	All propositions of logic are of equal rank; there are not some which are essentially primitive and others deduced from there	He himself sins against this!
6.21	Mathematical propositions express no thoughts	What is that?
6.23	If two expressions are connected by the sign of equality, this means that they can be substituted for one another. But whether this is the case must show itself in the two expressions themselves	Right!
6.2321	And, that the propositions of mathematics can be proved means nothing else than that their correctness can be seen without our having to compare what they express with the facts as regards correctness	right!
6.2323	The equation characterizes only the standpoint from which I consider the two expressions, that is to say the standpoint of their equality of meaning	Right!
6.343	Mechanics is an attempt to construct according to a single plan all true propositions which we need for the description of the world	Only description of nature
6.41	The sense of the world must lie outside the world…	Right!
	If there is a value which is of value, it must lie outside all happening and being-so. For all happening and being-so is accidental	Right!
	What makes it non-accidental cannot lie *in* the world, for otherwise this would again be accidental	= God? quite on the contrary
	It must lie outside the world	
6.421	Ethics and æsthetics are one	Journalistic shallowness
6.4311	Death is not an event of life. Death is not lived through	[in Greek:] *thanatos ouden pros hêmas* (death [is] not upon us)[a]

	Passage referred to	Translation of Pauler's comments
	If by eternity is understood not endless temporal duration but timelessness, then he lives eternally who lives in the present	Goethe[b]
6.5	For an answer which cannot be expressed the question too cannot be expressed…	He too does it
	If a question can be put at all, then it *can* also be answered	He too shows it to be false

[a] Compare Epicurus' *Kuriai doxai* 2: "Death is nothing to us: what is dissolved, does not perceive, and what is not to be perceived is nothing to us."

[b] Pauler is presumably here adverting to Goethe's remarks for example to the effect that "Every state, indeed every moment, is of infinite value, for it is a representative of eternity", (*Gespräche mit Eckermann*, November 3, 1823); "[Nature] knows neither past nor future. The present is its eternity" (*Die Natur*, 1773), "a sequence of consistent moments is always a kind of eternity (last letter to Zelter, 1832).

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Chapter 27
Winnowing Wittgenstein: What's Worth Salvaging from the Wreck of the *Tractatus*

Peter Simons

Abstract Wittgenstein's *Tractatus* still harbours valuable lessons for contemporary philosophy, but which ones? Wittgenstein's long list of things we cannot speak about is set aside, but his insistence that the logical constants do not represent is retained, as is the absolute distinction between names and sentences. We preserve his atomism of elementary sentences but discard the atomism of simple objects in states of affairs. The fundamental harmony between language and the world is rejected: it is the source of much that is wrong in the *Tractatus*. What remains is a clarified role for items in making elementary sentences true.

Keywords Wittgenstein · Tractatus logico-philosophicus · Logical atomism · Truth-makers

27.1 Introduction

Kevin Mulligan has maintained throughout his philosophical career a keen and judicious appreciation of the chief figures of that great philosophical explosion centred on Austria in the nineteenth and early twentieth centuries. Of these figures, the best known and most widely influential is Ludwig Wittgenstein.[1] Kevin has maintained, quite rightly, that it is impossible to appreciate the extent to which Wittgenstein's contributions to philosophy are as original as his many admirers contend without a great deal more knowledge of the Central European milieu from which Wittgenstein emerged than the majority of these admirers care to or are prepared to investigate. In this respect, the more diffuse and ample later philosophy presents a much greater challenge than the early work which culminated in the *Logisch-philosophische Abhandlung*.[2] The modest extent of the *Tractatus* and its more limited period of genesis, as well as its relatively crisper form and content, render it a more manageable and ultimately less controversial work than the post-Tractarian writings, whose

[1] Though not the best: that accolade has to go to the great Bernard Bolzano.

[2] On the *österreichische Umgebung* of the *Tractatus* see Mulligan (1985, 1991, 2009).

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thrust is even today occasionally obscure, despite more than a half century of frenzied exegesis. The originality of much of the *Tractatus* is hardly in doubt,[3] for even though Wittgenstein disdained the usual apparatus of indicating his sources,[4] the directness with which he confronts the theories of Frege and Russell and the novelty of several of his solutions render it very likely that a good portion of the ideas in the *Tractatus* are his own, whatever subliminal sources may have been at work as he compiled them.[5]

While several of the lessons of the later Wittgenstein have become so absorbed into contemporary philosophy that they pass almost without mention, the *Tractatus* is widely, and correctly, perceived as a partly inspired and partly flawed work. For the most part, once the Viennese phase of fanatical enthusiasm had passed, the critical opinion has tended to prevail. This is due in no small part to Wittgenstein himself, who from 1929 onwards frequently took issue with his earlier views and criticised them, usually effectively, though often sloppily and inaccurately.[6] After the later philosophy had begun to be received and absorbed in the 1950s, a more distanced, accurate, sympathetic and balanced assessment of the doctrines of the *Tractatus* began to emerge, so that its content and message, once considered obscure, is now fairly straightforwardly accessible.[7] There are exceptions of course,[8] but for the most part, I shall avail of this work to evaluate rather than elucidate the doctrines of the *Tractatus*.

[3] Despite the provocative as well as amusing Goldstein 1999, which suggests that Wittgenstein knowingly plagiarized from Bolzano. While it is theoretically possible, as Jan Sebestik has claimed (Sebestik 1989), that Bolzano's influence could have been carried to Wittgenstein by the school textbook (Zimmermann 1853), there is, despite various convergences, unfortunately no direct evidence that Wittgenstein ever read either Bolzano or Zimmermann, though given Wittgenstein's savant-like ability to absorb influences while forgetting their sources, it is hard to rule anything out. All the same, Goldstein is quite correct that whereas Wittgenstein's snooty and cavalier attitude to his sources, as evinced in the Preface to the *Tractatus,* might be all right for a literary publication, it certainly falls well short of the standards of scholarship expected of a doctoral thesis anywhere, and he should have been told by Moore and Russell to provide references and a bibliography before being allowed to pass. One can imagine the indignant explosion this would have caused. But rules are rules: genius or not, original or not, the *Tractatus* is sloppy and did not, as it stands, merit a Ph.D. Goldstein continues his discussion in more serious vein in his 2002.

[4] In the text, Wittgenstein mentions by name not just Frege and Russell but also Darwin, Hertz, Kant, Mauthner, Moore, Newton, Ockham, Socrates and Whitehead. Of these, only the references to Hertz are significant. In later writings (Wittgenstein 1977,p. 43) he cites Boltzmann, Hertz, Schopenhauer, Frege, Russell, Kraus, Loos, Weininger, Spengler and Sraffa as influences. These of course are not the only ones.

[5] This is apparent from the very beginning, in the 'Notes on Logic', about which see Potter (2009).

[6] On the inaccuracy of Wittgenstein's rendering of his own earlier ideas, see Kenny (1974).

[7] In this connection we should mention especially Anscombe (1959), Stenius (1960), Griffin (1964), Black (1964), Copi and Beard (1966), Dietrich (1973) and Fogelin (1976). Among more recent works one should add Frascolla (2000) and White (2006).

[8] I exclude the writings of those who expound the (now no longer so) 'new' Wittgenstein, a philosopher whose resemblance to the original is too partial to be of use apart from the purposes of exciting polemic.

So why should we still be interested in what Wittgenstein has to say in the *Tractatus*? Why does this work deserve more than just a historical appraisal? It is, I think, because it still has lessons to teach us, some of which are still insufficiently appreciated. Therefore it merits some work to try to disentangle those theses of the *Tractatus* that are worthy of being retained and further applied, from those which we may consign to the dustbin of past philosophy.[9]

27.2 The Centre of Gravity of the Tractatus is the Philosophy of Logic

Wittgenstein began his philosophical career by taking issue with aspects of the logics of Russell and of Frege. Since he was in closer and more regular contact with Russell, it is the dialogue with the latter that occupies the foreground. The 'Notes on Logic' are concerned with issues Wittgenstein and Russell had discussed in Cambridge. So also in the *Tractatus,* although Frege's 'great works' are lauded conspicuously more emphatically than 'the writings of my friend Bertrand Russell' (Preface), more space is spent on dealing with the ideas of Russell than with those of Frege. It is the philosophy of Russell's logic rather than its technical details, which draws Wittgenstein's attention and criticism.

Although the *Tractatus* begins dramatically with a staccato series of trenchant ontological statements, and ends in a series of statements about diverse topics including knowledge, science, the world as a whole, mysticism, the self, solipsism, value, metaphysics, and, most famously, silence, the major part of the book is explicitly concerned with matters of the proper understanding of logic. The ontological preliminaries can be understood, in view of Wittgenstein's principle of harmony (see later), as corollaries of the discussion of logic, placed first for dramatic effect rather than because of their key status; so indeed can some (but not all) of the final remarks. But a mere page tally tells its story. Out of the 134 pages of the *Tractatus,* some 116 pages, or 88%, deal with logic and its philosophy, and a mere 16 pages or 12% deal with the final miscellany. The *Tractatus* is first and foremost a work of the philosophy of logic. Note: It is not a work *of logic*. Wittgenstein does not trouble himself to actually formulate or execute a logic along the lines he sketches and advocates. Such under-labouring is left to lesser mortals.

Of course, the final pages, and in particular the negative injunction(s) concerning what cannot be said, are also very important. Wittgenstein treated them as of equal status in some respects and of greater status in some, including his Delphic remark

[9] A matter of Mancunian autobiography: When I started studying philosophy in 1971, as a postgraduate, the works I first read intensively and under supervision were: Kant's *Critique of Pure Reason,* Hegel's *Phenomenology of Spirit,* Heidegger's *Being and Time,* Wittgenstein's *Tractatus,* and his *Philosophical Investigations.* After those, nearly all sailing was plain. Of them, the only one I still regularly consult and consider useful for my own philosophy is the *Tractatus.* So for me this exercise is not merely academic: there's gold in them thar sentences.

to Ludwig von Ficker that the more important part of the *Tractatus* is the unwritten part (Letter to Ficker, printed in Engelmann, ed. 1967, 143 f.). But, however important Wittgenstein considered them, they would have hung freely without even the sketchy justification the *Tractatus* gives them had they not been preceded by a more or less detailed account of how language works when it works properly. And since I shall end up rejecting Wittgenstein's negative meta-considerations, it is only from the positive part that I shall endeavour to rescue material, which can be used hereafter.

27.3 The Key Theses of the *Tractatus*

Frege (1989) complained bitterly to Wittgenstein of being unable in the *Tractatus* clearly to separate basic propositions (axioms, unargued assumptions) from definitions, and both axioms and definitions from supported propositions (conclusions, theorems, if one will). And though he was an unsympathetic reader, Frege was right so to complain. Not that such pedantic differences mattered to the artist Wittgenstein. Since, in the end, all the apparent statements in the *Tractatus* were going to turn out as equally illegitimate,[10] there was no point, *for Wittgenstein,* in separating them out into quasi-axioms, quasi-definitions and quasi-theorems. But of course, *if* Wittgenstein was wrong about the status of his Tractarian propositions (as, with Russell, Frege and others, I think he was wrong), *then* Frege's criticisms hit the nail on the head. Since it takes some additional work to tease out how these three statuses (axioms, definitions, theorems) might be disentangled if we accept Frege's view (as attempted in Simons 1993), I shall content myself with considering all propositions in the *Tractatus* simply as 'theses'.

However, the theses of the *Tractatus* form not an egalitarian democracy but an Orwellian democracy: some are more equal than others. The most salient evidence of this is the numeration of the theses. Wittgenstein explains this as follows (footnote to 1):

> The decimal numbers assigned to the individual propositions indicate the logical importance of the propositions, the stress laid on them in my exposition. The propositions *n*.1, *n*.2, *n*.3, etc., are comments on proposition no. *n*; the propositions *n.m*1, *n.m*2, etc. are comments on proposition no. *n.m;* and so on.

Wittgenstein is not to be taken fully at his word here, because there are theses with the numbers 4.001, 4.01 and 4.1, all of which must be considered as comments on or elaborations of thesis 4. Roughly speaking, the logical importance of a thesis is measured by how few significant digits follow the decimal point. By this account, the theses 1, 2, 3, 4, 5, 6 and 7 are the most important. And there is much in this. But it is not the whole story, and we have Wittgenstein himself to thank for alerting us to it. For, in the Foreword to the work, he says:

[10] For this status, at least the New Wittgensteinians have the imprimatur of the Master: 6.54.

> The whole sense of the book might be summed up in the following words: what can be said at all can be said clearly, and what we cannot talk about we must pass over in silence.

The second half of this double thesis is the famous cardinal proposition 7:

> What we cannot speak about we must pass over in silence.

The first half occurs, however, in a much less salient place and with the relatively lowly number 4.116:

> Everything that can be thought at all can be thought clearly. Everything that can be put into words can be put clearly.

Call these two theses the *Principle of Silence* and the *Principle of Clarity,* respectively. The Principle of Clarity is connected intimately to Wittgenstein's logical atomism: in his conception, they go hand in hand. We shall find reason to reject the Principle of Clarity while retaining the logical atomism, so some other tenet of the *Tractatus* will have to go. We will come to that later.

The other key proposition of the *Tractatus* is tucked away with a number 4.0312, making it seem very insignificant, but it is not:

> My fundamental idea is that the 'logical constants' do not represent; that there can be no representatives of the *logic* of facts.

The 'fundamental idea' and its name (*mein Grundgedanke*) come from a *Notebooks* entry of 25 December 1914, but the idea goes back to Wittgenstein's earliest thinking, and is the key that unlocked his own conception of logic (Potter 2009, 49 ff.). Russell and Frege had both, in their different ways, considered not only the logical constants, including the familiar connectives and quantifiers, but also numerical terms, to stand for certain items: logical functions and logical objects. Wittgenstein's insight was that this is not how they function at all. The logical constant where this emerges the most clearly is negation. Frege treated it as a function, taking the True to the False and every other object to the True. Wittgenstein's whole idea of propositions is that, unlike names, they do not simply stand for a thing as the name 'Napoleon Bonaparte' stands for the French emperor. Rather propositions are two ended or *bipolar:* they can be true or false, and with the exception of tautologies and contradictions, any proposition could be either the one or the other, depending on how things are in the world. Much of Wittgenstein's early work on logic stresses this bipolarity, and it is only with the introduction of the truth-tabular notation for the logical constants in the *Tractatus* that its importance is slightly masked. Negation is not a function name like the square function in arithmetic: the notational similarity between $\sim(\ )$ and $(\ )^2$ is misleading. Rather, negation *toggles* a proposition's polarity, so its truth-conditions are exactly the opposite of its operand. Double negation returns the polarity to its original without trace, except notationally, and this impressed Wittgenstein. He wrote that

> [n]othing in reality corresponds to the sign '~'. … ($\sim\sim p = p$). The propositions 'p' and '$\sim p$' have opposite sense, but there corresponds to them one and the same reality. (4.0261)

Negation so impressed Wittgenstein that he made the joint negation $N(P)$ of any set of propositions P his sole undefined logical operator.

This different understanding of negation, which when generalized to other logical constants results in Wittgenstein's new understanding of the nature of logic, turns on his rejection of Frege's view that propositions (sentences, *Sätze*) stand for truth-values and so are a special sort of names, and simultaneously the rejection of Russell's view that they stand for complexes. They do not stand for *anything* in the way names stand for individuals: they are true or false. This was so important to Wittgenstein that he originally thought of calling his nascent work on logic *Der Satz*.[11]

While it is not our chief aim here to go on and apply Wittgenstein's insight, it is worth recording that Wittgenstein's view has regrettably remained largely uninfluential among logicians. The idea that a sentence can be assigned one of the truth-values, **T** and **F,** as its extension or semantic value, that the logical connectives stand for truth-functions (functions from truth-values or tuples thereof to truth-values), and that other logical constants can likewise be assigned various functions as their extensions, all trek directly away from Wittgenstein and back to Frege. The subsequent development of modal and other intensional logics, of which the *Tractatus* would have none, have only compounded the error, if error it is. At any rate, logicians have voted with their feet to reject the Tractarian *Grundgedanke,* and philosophically, that, in my view, is a big mistake.

27.4 The Harmony Principle

The *Tractatus* is famous for something called 'the Picture Theory of Meaning'. As such, it is wrongly famous. At no point does Wittgenstein account for meaning *per se* as depicting, or through a picture theory. There is a relatively unproblematic notion of depiction at work in the *Tractatus,* but it applies *only* to elementary (atomic) propositions. The names in an elementary proposition stand for objects, the way in which they stand to one another represents the form of the state of affairs that the atomic proposition as a whole thereby depicts. If that state of affairs exists (obtains, *besteht*), the elementary proposition is true; if it does not, the elementary proposition is false (4.25). The names in a false elementary proposition still name objects, but these do not, in reality, stand to one another as the proposition represents them as standing. How they *do* stand is not something that their *not* so standing can inform us, because all elementary propositions are logically independent.[12]

Generalizing from the atomic case, a compound proposition is a truth-function of elementary propositions, and it is true or false depending on two things: which of

[11] The meaning of the word 'Satz' sits uncomfortably between the meanings of the English 'sentence', 'proposition' and 'statement'. It is usually translated as 'proposition' but for many purposes and in many places 'sentence' is a better choice, and I will use either term. Wittgenstein never believed in propositions in the sense of Russell and Moore or Gedanken in the sense of Frege. That modern German has taken to calling such things 'Propositionen' only underlines the point.

[12] According to the *Tractatus,* that is. This logical independence was the first thing to be discarded when Wittgenstein reconsidered his position in 1929.

the elementary propositions are true and which are false; and what its logical form is, i.e. how it is compounded logically from its constituent elementary propositions. Since this is always a completely determinate matter (the Principle of Clarity), every compound proposition leaves a determinate set of ways in which it can be true and in which it can be false to be fixed by which of those elementary propositions are true and which are false, i.e. which of the ultimately depicted states of affairs exist and which do not. In this extended sense, a compound proposition can be said to 'depict' reality. But it is an extended and strained sense, since, in general, a compound proposition can be true in many ways and false in many ways. For example, if *p, q* and *r* are elementary propositions, the compound proposition p & (q v r) can be true in three ways and false in five ways.[13] So the compound proposition does not limit reality to just one way it can be, and the idea of a picture is severely strained. What can be said, however, is that there is no vagueness about the delimitation of the precise ways in which the proposition can be true from those in which it can be false, and that is again the Principle of Clarity.

However, there is an underlying and deeper principle behind Wittgenstein's idea of the way language relates to the world. I call it the *Principle of Harmony*. It is a general attitude towards the relationship between language and the world, roughly, that they are in a deep and ultimately unsayable harmony. It encompasses the view that the fundamental grammatical categories line up perfectly with the fundamental ontological categories of object, as follows:

Linguistic category	Ontological category
Name	Object
Difference of names (shown)	Difference of objects (shown)
Sentence	Situation
Elementary sentence	State of affairs
True sentence	Fact
Form of elementary sentence (shown)	Form of state of affairs (shown)
True elementary sentence	Atomic fact (positive)
True negation of elementary sentence	Negative fact
Selection of elementary sentences (as if true)	Possible world
Totality of true sentences	The world (totality of facts)
Totality of objects	The substance of the world

A situation is a general way the world could be, for example, the way of making p true and one or both of q and r true as well. Further, the form (possible configuration) of the names in an elementary proposition perfectly corresponds to the form (possible structure) of the state of affairs it depicts:

[13] This is not counting all the things that are irrelevant to the states of affairs depicted by these elementary propositions, i.e. the number of ways in which all the other elementary propositions can be true or false, which is $2^N - 3$ for N elementary propositions overall. Taking these into account there are 3. $2^N - 3$ ways for our proposition to be true and 5. $2^N - 3$ ways for it to be false. So we should more accurately say there are three salient kinds of ways for it to be true and five kinds of ways for it to be false.

> 2.161 There must be something identical in a picture and what it depicts, to enable the one to be a picture of the other at all.

This exact correlation or harmony is carried so far that since Wittgenstein conceives of names as logically unarticulated or without parts, he concludes that objects must themselves be ontologically unarticulated or without parts:

> 2.02 Objects are simple.
> 2.0201 Every statement about complexes can be resolved into a statement about their constituents and into those propositions that describe the complexes completely.

Now the Principle of Harmony is by no means Wittgenstein's invention or sole property. In their different ways, both Frege and Russell subscribe to it. Indeed, the *Grundgedanke* is a step away from it, since there is no item in the world corresponding to any item in a sentence which expresses a logical constant. But Wittgenstein expresses the Principle in a particularly explicit form and draws out its consequences radically: for example, in conjunction with his view about the reduction of sentences about complexes to sentences about simples, it has the bizarre effect of enabling him to argue from his armchair that the world must be made up of objects without parts. It is also the Principle of Harmony that underlies Wittgenstein's emphasis on showing versus saying, since he cannot accept that some things (such as logical form) which can be shown cannot also be said (4.1212): if it could be said (put in a word), it would have to correspond to something, but since it can be shown, it is not something a word can stand for. Likewise, the Principle of Harmony is behind Wittgenstein's logically inconvenient and linguistically hopelessly impractical refusal to accept a sign of identity, since having two different names for the same individual is contrary to the Harmony Principle. It is behind his refusal to accept a metalanguage, his view that the limits of my language are the limits of my world, and much more.

In short, the Harmony Principle is at the root of most of the evils of the *Tractatus,* and while Wittgenstein's rhetoric in support of it may bemuse the unwary, it did not faze his more astute commentators such as Russell, Ramsey and Carnap. Indeed, it is precisely where Wittgenstein appears to let up on the principle, as in the *Grundgedanke,* that we have some of his more interesting insights. However, even here, Wittgenstein strives mightily (and ultimately of course, unsuccessfully) for a logical notation which would eliminate the need for signs expressing logical constants.

27.5 Two Kinds of Atomism

Russell called the philosophy that he and Wittgenstein developed in the years 1911–1914 'logical atomism'. The designation, in fact, predated his involvement with Wittgenstein, being first aired in his French paper 'Le réalisme analytique' of 1911, where he writes 'cette philosophie est un atomisme logique' (Russell 1992, p. 412, 135). But it applies in full to Wittgenstein's *Tractatus*. There are, in fact, two layers or levels of atomism in the *Tractatus* (as indeed in Russell). The first is the atomism

of propositions. All propositions, according to this view, are logical complications of elementary or atomic propositions, and in the extensional logic of the *Tractatus,* this means they are all truth-functions of elementary propositions. Then there is the atomism of objects to be found when we dig inside propositions to their non-propositional parts. This ends with the view that the objects, whose interconnections form states of affairs, are without parts, by the reduction we mentioned earlier. While Wittgenstein did worry about this kind of atomism in the *Notebooks* (48–71 *passim*), in the end he convinced himself that an atomism of objects was the only way to secure the Clarity Principle:

> 2.0211 If the world had no substance, then whether a sentence had sense or not would depend on whether another sentence was true.
> 2.0212 It would then be impossible to develop a picture of the world (true or false).

Both forms of atomism have been widely rejected. The second is certainly insufficiently justified by Wittgenstein's arguments. In the extreme form that links mereological simplicity of referent with grammatical simplicity of expression, the Harmony Principle is simply unbelievable and I shall not argue the case. But an atomism of propositions is a more interesting prospect, and as I shall argue below, it is, in a form modified from Wittgenstein's, acceptable and arguably correct.

27.6 The Norms of Silence

One of the most dramatic aspects of the *Tractatus* is its injunction to silence: *Wovon man nicht sprechen kann, darüber muß man schweigen* (7). This must be one of the German sentences best known among non-native speakers. Like much else in the *Tractatus,* it derives from the Harmony Principle. It does not follow from it directly, because one could uphold harmony and still allow that we can talk about the harmony. Harmony shows itself in the correlations between linguistic and ontological features, but we could also talk about it. But Wittgenstein insists that 'What *can* be shown *cannot* be said'. (4.1212) So, there is nothing left but to keep quiet about the things that show themselves, on pain of talking nonsense.

Wittgenstein retained throughout his philosophical career an extreme aversion to what he called 'gassing' (*Geschwätz*), in which people talk about things that, in his view, cannot and should not be talked about, whether philosophical or not. In some cases, we can sympathize with him: part of the chat that accompanies matters aesthetic, from art to wine, is pretentious verbiage. Wittgenstein was also, in general, fairly tight-lipped about his personal-life decisions, such as choosing to volunteer in World War I, fund a super-cannon, give away his fortune, work as a schoolteacher, take hospital work in the World War II or buy his sisters out of the Holocaust. He also apparently found it difficult to put his feelings about music into words. However, the *Sprechverbote* extend very widely and, notably, include attempts to talk about the relationship between language and the world, as distinct from just talking about the world. Since Wittgenstein's own enterprise in the *Tractatus* is all about

the relationship between language and the world, that means, by his own lights, the book is nonsense (6.54). Inordinately much ink has been spilt about this paradox, and by some commentators it is seen as the magic key to interpreting Wittgenstein from A to Z. How seriously it is taken depends on how correct the injunctions to silence are taken to be. My own view has always been that expressed by Russell in his introduction to the *Tractatus*:

> What causes hesitation [sc. about the injunctions to silence] is the fact that, after all, Mr Wittgenstein manages to say a good deal about what cannot be said, thus suggesting to the sceptical reader that possibly there may be some loophole through a hierarchy of languages, or by some other exit. (xxi)

No one was more familiar than Russell with the perils of self-reference and other dangers of unrestricted and unprotected uses of language. This lends his gentle rejection of Wittgenstein's injunction a certain authority. His throwaway hint about language hierarchies not only anticipates Tarski but it also safeguards a place for linguistics, semantics, and other modern meta-disciplines, much of which Wittgenstein would condemn in advance to silence. While the bounds of the sayable are by no means evident, they are incomparably wider than Wittgenstein sets them. To adapt a not unrelated (and admittedly unduly optimistic) slogan of Hilbert's: *Wir müssen reden—wir werden reden!*

27.7 Atomism and Truth-Making

The *Tractatus* got several important things dead right: Things that were not, are not and have not been commonplace in philosophy since its publication. We already mentioned the *Grundgedanke* and the utter distinctness of sentences from names, both of which are widely ignored in the logical community.

Then there is the atomism of sentences, which is also widely rejected. We are not interested in trying to show that all sentences are ultimately about simples. It is the first level of atomism only that warrants retention. Here we have to be careful, as Wittgenstein was, though in a different way from his. Sometimes sentences look simple but are not. Following Ramsey and Davidson, it is held that a grammatically simple sentence like *John kissed Mary* harbours an implicit quantification: its ''logical form" is more perspicuously represented as *For some x, x is a kissing of Mary by John*. Such an idea was not alien to Wittgenstein: he writes, obviously with the theory of descriptions in mind, 'It was Russell who performed the service of showing that the apparent logical form of a proposition need not be its real one' (4.0031). If the meaning of a sentence is given by its truth-conditions, then the meaning of *John kissed Mary* must be the meaning of an existential sentence quantifying over kissing events. But that is not all there is to it. The sentence is in the simple past tense, which means its truth-conditions concern kissing events only before the time of its utterance, whereas the form *For some x, x is a kissing of Mary by John* does not contain this limitation. This could be true if some kissing of Mary by John

takes place after the utterance and none does before. But now we come up against a problem. If the *sentence* has truth-conditions, these vary according to the time of utterance. So, the sentence *per se* does not have a fixed set of truth-conditions at all. Perhaps a given utterance of it does, but Wittgenstein does not talk of utterances. Traditionally, it is *propositions* that have fixed truth-conditions. If so, then the proposition is not determined by the sentence. Nor does the proposition have anything to do with times of utterance, since it is sentences that are uttered. Rather, in uttering a sentence, a speaker expresses a proposition, one jointly determined by the sentence and the context of its utterance, in ways now familiar, but not well known when Wittgenstein was writing. If we wish to determine the proposition independently of the context of utterance, the time before which such kissing is meant to have taken place must be built into the proposition as in the fashion of *For some x, x is a kissing of Mary by John before time T*. To specify the truth-conditions in a non-contextual way, all the indexical elements have to be replaced by explicit specifications.

There is a way to cut through this decontextualization issue while retaining Wittgenstein's basic insight about atomism. It is to consider not meaning but *truth-making*. Any event of John's kissing Mary, occurring before an utterance, referring to those two people, of 'John kissed Mary', suffices to make that utterance true. Because *any* event satisfying the description and being in the right time-range will do, the truth-*conditions* for the utterance are indeed those of a temporally constrained existential quantification over events of John's kissing Mary. The sentence, and the utterance, need not be ascribed a hidden or disguised form: 'All *Sätze* of our everyday language are in fact, just as they are, in perfect logical order'. (5.5563)

Wittgenstein himself ascribes the truth-making role to states of affairs:

> 4.21 The simplest kind of proposition, an elementary proposition, asserts the existence of a state of affairs.
> 4.25 If the elementary proposition is true, the state of affairs exists; if the elementary proposition is false, the state of affairs does not exist.

And, he might have added, vice versa, which would have made it perfectly clear that states of affairs are truth-makers for elementary propositions, and further, that when the state of affairs in question fails to exist, *nothing further* is required for the elementary sentence to be false, and, therefore, of course, for its negation to be true. The way in which more logically complex sentences get to be true or false depends on which states of affairs exist, and this is something that according to the extensional account of truth-conditions and the general form of propositions given in the *Tractatus* means that there is no universal recipe for how a proposition stands to its truth-makers, but there is a general scheme for how the complications ramify, provided by the truth-tabular analysis of compound propositions.

If we now retain the idea of some sentences being true simply because of something existing, but dispense with states of affairs as that which those somethings have to be, we arrive at the idea of any entity whatever as a potential truth-maker, if only for a sentence to the effect that *it,* that entity, exists. If we embrace propositions, every entity will perforce be a truth-maker for its own personal existential proposition. Which entities, and perhaps, indeed, what kind of entities the truth-makers are,

will not be a matter for logic to decide. And perhaps, surprisingly, Wittgenstein agrees at least with the first part of this:

> 5.557 The *application* of logic decides what elementary propositions there are. What belongs to its application, logic cannot anticipate.

Freed of the requirement to rest truth on simples and their concatenation, as in Wittgenstein, we can allow untensed existential sentences about any item whatsoever to have the object in question as truth-maker. Whether such existential propositions are all the atomic propositions there are is a more difficult point, but it is worth entertaining as a speculative hypothesis. We can then add existential sentences about several things' existing, as in *Russell and Whitehead exist,* as positive but not atomic. Indeed, it seems plausible to *define* positive sentences as those which are true if and only if certain things exist. We can further divide these into *positive specific,* where the things in question are named or otherwise univocally specified, and *positive generic,* where their kind, or a description under which they fall, is given. So singular and plural existentials like

> Napoleon Bonaparte exists
> John, Paul, George and Ringo exist

are positive specific, while 'standard' existentials like

> Tame tigers exist
> Black holes exist

are positive generic. There will also be hybrids, as in

> Julius Caesar and the soldiers of Legio XIII Gemina exist.

Hence

> There is a kissing of Mary by John before time *T*

is also a positive generic proposition; it is, using Barry Smith's felicitous term, 'truth-maker hungry'; it needs a truth-maker for it to exist in order to be true. Many grammatically simple sentences fall into this camp.

The negations of positive sentences are negative, though we have to be careful about the negations of complex positive sentences like *Russell and Whitehead exist,* since such a negation would be true if only one of the dynamic duo failed to exist. And the truth-functional compounds of elementary propositions compound in the usual way, so they in general are neither positive nor negative.

An interesting question arises as to whether atomic propositions may require the existence of more than one object. In Wittgenstein they do, though this is not apparent on the surface, because Wittgenstein's focus is on the state of affairs as sole truth-maker. But a state of affairs is a combination (*Verbindung,* 2.01) of objects just as an elementary sentence is a nexus or concatenation (*Zusammenhang, Verkettung,* 4.22) of names. So the state of affairs cannot exist unless its constituent objects exist. But of course these objects exist whether the state of affairs exists or not (2.024), or indeed whether any states of affairs involving them exist or not; so by Wittgenstein's lights, we are allowed to say neither that the objects in question

exist nor that they must exist if the state of affairs exists. We have already rejected these injunctions to silence. So, ignoring them, if *abc* is an atomic sentence about the objects *a, b* and *c,* the following are true:

> Necessarily, '*abc*' is true if and only if the state of affairs that *abc* exists
> Necessarily, the state of affairs that *abc* exists only if *a* exists and *b* exists and *c* exists

whence it follows, by simple modal propositional logic that

> Necessarily, '*abc*' is true if and only if *a* exists and *b* exists and *c* exists and the state of affairs that *abc* exists

That we do not *need* to mention *a, b* and *c* as truth-makers for '*abc*' comes about because the state of affairs that *abc suffices* to make '*abc*' true: the constituent objects *a, b* and *c* come along as part of the package. In non-Wittgensteinian parlance, the state of affairs is *existentially dependent* on its constituent objects. Precisely this existential dependence is what led Kevin Mulligan, Barry Smith and myself to canvass existentially dependent moments ('tropes') as truth-makers for many everyday truths (Mulligan et al. 1984). There can be no (transitive) kiss without a kisser and a kissee, so any of John's kisses of Mary suffices to make it tenselessly true along Davidsonian lines that John kisseth Mary (ignoring tense for simplicity and expressing the tenseless verb by an obvious device). John and Mary can be brought in as part of the story, but since the existence of any such kiss entails the existence of both of them, they can go without being mentioned as truth-makers, as can Wittgenstein's objects, even though the truth of the proposition that John kisseth Mary entails their existence (and indeed, by the nature of transitive kissing, their simultaneous existence at the time of any such J-to-M kissing). And unlike Wittgenstein's objects, John and Mary signally fail to exist necessarily. So our moments or tropes are the truth-making counterparts in many cases of Wittgenstein's states of affairs.

Wittgenstein's extensionalism means he has to propose reductionist, deflationist or eliminativist accounts of modality, intentionality and other purportedly extensionality-busting propositions. The post-Tractarian consensus has been that such accounts will not work, and that such propositions should be taken variously as primitively distinct, or as requiring an analysis going far beyond the resources Wittgenstein has available. I shall shamelessly duck such issues in this essay: they take us too far afield and would require much more discussion.

The *Tractatus* starts and finishes with the world. 'Welt' is the second word of the numbered text as well as the eleventh-last. Given our rejection of facts and states of affairs, if we allow the term 'world' at all, it has to be the totality of things (objects), understanding this term not in Wittgenstein's restricted way but in the Austrian way as meaning any item, any *etwas* whatsoever; so,

> Die Welt ist alles, was es gibt (existiert).
> Die Welt ist die Gesamtheit der Gegenstände.
> The world is everything there is (that exists).
> The world is the totality of objects.

The serious questions hanging over this are whether we are entitled to use the terms 'Gegenstand', 'es gibt', 'existiert' and 'Gesamtheit' (object, there is, exists, totality)

in a way which spans not just simples or substances or individuals, but anything whatsoever, even allowing that there might be infinitely many types of objects, as envisaged by Russell, and yet so that the notion of the totality of all of them is meaningful. Even with his restricted notion of object, Wittgenstein rejected the possibility, and always did so. The possibility of genuinely universal quantification over a single domain has been subject to much scrutiny (cf. Rayo and Uzquiano 2006). I think it is acceptable (cf. Simons 2003), but it requires us to be much more sophisticated about names and nominalization than Wittgenstein was in the *Tractatus*. As with so much of the work, and in complete contradiction of its gung-ho Preface, Wittgenstein's *Tractatus* opened up questions of logic, ontology, and their relationship, whose resolution is still outstanding.

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Chapter 28
Wittgenstein, ses prédécesseurs et ses contemporains

Mélika Ouelbani

Abstract Dans plusieurs de ses interventions écrites ou orales, Kevin Mulligan a souvent laissé entendre qu'on devrait cesser d'associer le génie à la philosophie de Wittgenstein. Dans cet article, je voudrais montrer à quel point Wittgenstein aurait approuvé cette idée déjà dans sa période tractatusienne mais surtout dans sa philosophie des jeux de langage, puisque toute pensée est par définition partagée. On ne pense pas de manière isolée de la même manière que l'on ne parle pas seul et il est tout à fait juste de dire avec Mulligan que les affirmations de Wittgenstein « ont une préhistoire et une suite autrichiennes » et même au-delà.

Keywords Wittgenstein · Langage · Tradition analytique · Philosophie autrichienne · Logicisme

Dans plusieurs de ses interventions écrites ou orales, et dans le style aussi captivant que pertinent et incisif que nous lui connaissons, Kevin Mulligan a souvent laissé entendre que beaucoup d'entre nous devraient cesser d'associer le génie à la philosophie de Wittgenstein. Je pense, en particulier, aux conférences qu'il a prononcées en 2010 à Montréal[1] ayant justement pour thème: *Wittgenstein et ses prédécesseurs austro-allemands* et à un article de 2004, publié sous le titre révélateur et suggestif de *L'essence du langage, les maçons de Wittgenstein et les briques de Bühler*.

Il est vrai que, dans ce cadre, Mulligan n'a jamais, à ma connaissance, utilisé le terme de «plagiat», mais par exemple dans la troisième conférence prononcée à Montréal, il cite un passage de Bühler que l'on pourrait attribuer à Wittgenstein et selon lequel «l'ancienne conception s'appuyait essentiellement sur deux suppositions intrinsèquement liées. D'une part on croyait que les fonctions du langage pouvaient être intégralement ramenées à la fonction *dénominative* des mots: chaque mot est un nom de quelque chose, c'est-à-dire de sa signification … Et corrélativement à cette première thèse, on se représentait *les processus d'apprentissage de la parole* comme un apprentissage de la nomination des objets. Ces deux thèses sont

[1] Kevin Mulligan: Wittgenstein et ses prédécesseurs austro-allemands, Conférences Hugues Leblanc, Montréal, Avril 2010.

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fausses…». Mulligan n'en tire aucune conclusion, mais à la suite de ce paragraphe, il dit simplement que «l'auteur de ce passage, publié en 1909, est Karl Bühler» sans rien ajouter; ce qui est bien plus éloquent qu'un discours. Ensuite, il cite le premier paragraphe de *Recherches philosophiques*, lequel dévoile, il est vrai, une similarité assez troublante avec ce texte de 1909. D'ailleurs, il poursuit et explique, preuves à l'appui, que comme Wittgenstein, Bühler n'envisageait plus la signification en rapport seulement avec le contexte propositionnel.

D'après ces premières remarques, le moins que l'on puisse dire est que Wittgenstein aurait dû citer les auteurs dont il s'est inspiré ou qui ont partagé ses préoccupations et qui semblent être beaucoup plus nombreux que ceux qu'il reconnaît en 1931, c'est-à-dire «Boltzmann, Hertz, Schopenhauer, Frege, Russell, Kraus, Loos, Weininger, Spengler, Sraffa». Il aurait dû citer également Bühler, Scheler, Husserl, Musil …

C'est un fait que les apports de Wittgenstein à la philosophie sont une question plutôt limpide, en ce sens que l'influence de cet auteur sur la philosophie contemporaine sous ses différents courants ne peut être qu'unanimement reconnue, même s'il a toujours affiché son refus de faire école. Comme le fait remarquer W. Stegmüller par exemple, de la même manière que la philosophie moderne est reliée au kantisme, la philosophie contemporaine l'est à Wittgenstein d'une manière ou d'une autre: influence, reprise, continuité, critique… En revanche, s'interroger sur le rapport que sa pensée a pu entretenir avec ses contemporains ou ses prédécesseurs de façon générale, qu'ils soient philosophes ou pas et s'interroger sur le caractère inédit ou pas de sa philosophie ne risque-t-il pas de paraître superflue, lorsqu'on se place de son point de vue?

En effet, dès le début de sa réflexion philosophique, Wittgenstein a exprimé, à plusieurs reprises, l'inopportunité de vouloir préciser ses liens avec les autres philosophes. C'est ainsi que dans l'avant propos du *Tractatus*, il affirmait déjà son désintéressement en ces termes: «jusqu'à quel point mes efforts coïncident avec ceux d'autres philosophes, je n'en veux pas juger. En vérité, ce que j'ai ici écrit n'élève dans son détail absolument aucune prétention à la nouveauté; et **c'est pourquoi je ne donne pas non plus de sources, car il m'est indifférent que ce que j'ai pensé, un autre l'ait pensé avant moi**».

Dans *une première partie*, je m'interrogerai sur la question de savoir dans quelle mesure Wittgenstein peut nier toute prétention à la nouveauté. Je montrerai le caractère plutôt innovant de sa philosophie en contredisant l'idée selon laquelle seule la seconde partie de son œuvre serait inédite. Toutefois, si Wittgenstein prête si peu d'importance au caractère inédit ou pas de sa pensée, pourquoi a-t-il réagi avec autant d'agressivité à l'idée que Carnap l'aurait plagié.

D'un autre côté, étant donné que la philosophie est conçue comme étant une activité et non plus comme une théorie ou une doctrine quelconque, je m'intéresserai, dans *une seconde partie*, à la question de savoir dans quel sens on peut parler encore d'un acquis philosophique ou autre que philosophique, d'ailleurs, pour Wittgenstein.

Avant d'essayer de clarifier ces questions, je rappellerai que le *Tractatus*, qui a été publié du vivant de son auteur, se réfère à des auteurs, en particulier Hertz, Frege et Russell, alors que, comme nous le savons, les écrits post-*Tractatus* ont été publiés

à titre posthume et ne se trouvaient certainement pas dans une version finale prête à être publiée.

28.1 Wittgenstein et la tradition philosophique

Selon un des plus grands connaisseurs de Wittgenstein et de sa philosophie, Von Wright, ses premiers écrits seraient dans la lignée de ceux de Frege et Russell, alors que toute la philosophie post-*Tractatus* serait inédite. Il fait remarquer que «le jeune Wittgenstein avait eu pour maîtres Frege et Russell. Ses problèmes étaient en partie les leurs», et ceci contrairement à l'oeuvre de maturité de Wittgenstein, laquelle, bien que traitant de problèmes qui proviennent du *Tractatus*, «signale une rupture radicale par rapport aux chemins antérieurs de la philosophie» (Von Wright 1986, p. 37). La question de savoir s'il y a rupture ou pas dans l'oeuvre de Wittgenstein est aujourd'hui résolue. Mais, l'essentiel à retenir de cette remarque de V.Wright, c'est que le *Tractatus* aurait été influencé par des logiciens tels que Frege et Russell et ne serait donc pas une oeuvre inédite, contrairement à la seconde partie de l'oeuvre, qui, elle, serait originale.

Il me semble que cette thèse, ou plus exactement, la première partie de cette thèse doit être nuancée et les débuts philosophiques de Wittgenstein ne sont pas moins originaux que la suite de son œuvre, malgré ses discussions avec Frege et Russell, en particulier. En vérité, Wittgenstein a, certes, été amené à contacter Frege puis Russell, les deux grands logiciens de l'époque; mais pourquoi l'a-t-il fait?

Wittgenstein est redevable, comme il le dit dans la préface du *Tractatus* aux «œuvres considérables de Frege et aux travaux de [son] ami B.Russell», mais il ne s'agissait pas, pour lui, d'entrer dans leur projet de fonder les mathématiques; en réalité, il avait des préoccupations personnelles, lesquelles avaient un rapport avec la logique. S'il avait cherché à les contacter, c'est parce qu'il s'était heurté à des problèmes de logique pour essayer de trouver une solution à ses problèmes et pour répondre aux questions qui étaient les siennes. Pendant la rédaction du *Tractatus* et quelques années après, Wittgenstein n'a cessé de confirmer son affirmation de la préface du *Tractatus*, selon laquelle il ne prétend pas à l'originalité, mais il rajoute l'idée très juste qu'il a fait quelque chose de nouveau avec les travaux de ses prédécesseurs ou plus exactement de ses contemporains: Frege et Russell, autrement dit les logicistes. «Lorsque j'étais en Norvège, l'année 1913–1914, il m'est venu certaines idées personnelles…Ce qui m'est arrivé cette année là,…, me fait l'impression d'une naissance, celle de chemins nouveaux…» (*Idem* 30).

Quels étaient ces problèmes[2]? Pourquoi avait-il besoin de la logique formelle? A-t-il repris le projet logiciste?

Le problème que se posait Wittgenstein à l'époque du *Tractatus* est clairement le rapport entre un langage formel et l'empirique ou le réel; et c'est d'ailleurs effectivement la logique qui devra rendre possible cette relation; ce qui explique

[2] Pour cette question, je me réfère en particulier, à part les différentes biographies de Wittgenstein, au livre de Janik et Toulmin (1973).

probablement qu'il a eu recours aux logiciens de l'époque. Autrement dit, et pour reprendre Janik et Toulmin dans *Wittgenstein, Vienne et la modernité*, «le symbolisme de Frege et de Russell était donc pour Wittgenstein, un moyen d'atteindre son but…» (Janik et Toulmin 1973, p. 153). À l'époque de la rédaction du *Tractatus*, et lors de son premier contact avec Frege, puis surtout avec Russell, Wittgenstein était préoccupé par des questions précises, qui étaient déjà, certes, posées par la physique de Hertz, mais à une plus petite échelle, et qui consistaient dans l'application de la logique au réel et donc dans un autre cadre que celui des mathématiques. Comme l'explique Mc Guinness, «ce sont Hertz et Boltzmann qui lui ont donné l'idée de tableau ou de corrélat mental de la réalité, ou seule importe la structure logique de la théorie scientifique en question (pour ce qui les concernait). Mais Russell lui a donné des outils qui lui ont permis d'étendre ce type d'analyse à l'ensemble de notre langage» (Mc Guinness 1991, p. 115). Dans une conversation du 22 décembre 1929 avec Waismann, Wittgenstein (1991, § 46, 14) reproche justement à Frege, Peano et Russell le fait que «en construisant la logique symbolique…[ils] n'ont eu en vue que son application aux seuls mathématiques et n'ont jamais pensé à la représentation (Darstellung) d'états de choses réels ». On peut dire que son premier projet était d'élargir le logicisme en cherchant une sorte d'intervention de la logique dans le domaine du réel.

Donc, bien que sa logique soit certainement inspirée des deux grands logiciens de l'époque, sans qu'elle en soit nullement une reprise—on connaît ses critiques de la logique frégéenne et russellienne–, les intérêts philosophiques de Wittgenstein étaient originaux[3], même si, peut-être, inspirés par sa propre culture et ses contemporains. C'est ce qui peut expliquer son génie qu'il qualifie de «reproductif». Il est important de noter dans les années trente, il réaffirme: «Mon originalité (si c'est le mot juste) est, à ce que je crois, une originalité de terrain, non de semence. (Peut-être n'ai-je aucune semence qui me soit propre). Jette cette semence sur mon terrain, et elle croîtra autrement que sur n'importe quel terrain». Il aurait ainsi, semé des graines frégéennes et russelliennes en particulier pour en faire pousser quelque chose de différent et de nouveau. Hertz, Frege et Russell on été en un sens «wittgensteinisés», leurs projets et méthodes étendus.

28.2 La question du plagiat et la réponse dans la philosophie post-Tractatus

J'ai essayé de confirmer que Wittgenstein n'attachait pas d'importance au fait que d'autres aient pu avoir les mêmes idées que lui et ne jugeait pas utile de mentionner dans le détail les influences qu'il aurait pu revendiquer. C'est ainsi qu'on peut dire qu'il a élargi le projet logiciste en s'intéressant à la structure du monde et du

[3] Même si les problèmes qui préoccupaient Wittgenstein étaient un peu dans l'air à Vienne, c'est ainsi que selon Janik et Toulmin (1973, p. 93), «tout artiste ou intellectuel conscient de la situation de la cacanie devait s'interroger sur la nature et les limites du langage, de l'expression et de la communication».

langage et que la philosophie du *Tractatus* était normalement située dans la tradition de l'époque.

Mais si Wittgenstein attachait si peu d'importance à la question des influences ou même *des reprises*—selon Kevin Mulligan– pourquoi son attitude vis-à-vis de Carnap, qu'il avait accusé de plagiat, par l'intermédiaire de Schlick, avec autant d'agressivité?

L'article de Carnap de 1932, intitulé «Die physikalische Sprache als Universalsprache der Wissenschaft», a déclenché une véritable colère chez Wittgenstein. Cette quasi agressivité est assez troublante lorsqu'on sait l'impact du *Tractatus* sur la philosophie néopositiviste en général et en particulier sur Schlick, Waismann et Carnap. Ce dernier reconnaît lui-même dans son autobiographie ce qu'il doit à Wittgenstein, qu'il considère comme l'auteur qui l'a le plus influencé philosophiquement.

Dans sa lettre à Schlick il déplore moins l'idée que Carnap l'ait plagié que celle de se trouver dans la situation que son travail pourrait être perçu comme une version «réchauffée» des travaux de Carnap ou un plagiat (Lettre de Wittgenstein à Schlick datant du 6 mai 1932) et il ne serait pas si indifférent au fait que ses idées soient partagées ou pas. Il me semble que le problème de la colère de Wittgenstein se trouve tout à fait ailleurs: il accepte qu'on lui «vole des pommes sur son pommier», mais n'accepte pas que «l'arbre soit mis en commun» et qu'on puisse parler d'école. En clair, il n'accepte pas d'être associé au Cercle de Vienne. «I don't want to join forces with Carnap and to belong to a circle to which he belongs» (*Idem*).

Carnap a-t-il vraiment repris le physicalisme de Wittgenstein ? Des questions se posent: pourquoi celui-ci n'a-t-il pas tellement réagi au fait que le *Tractatus* ait été certainement la principale inspiration de la philosophie néo-positiviste? Pourquoi réagit-il à cette époque précise et de façon si démesurée, alors que le terme de «physicalisme» avait été utilisé dans l'*Aufbau* et que ce texte a pour prétention d'élargir le logicisme frégéen au réel et n'est pas sans rappeler le projet du *Tractatus*?

Wittgenstein a-t-il utilisé le terme de *physicalisme* et en quoi le projet physicaliste de Carnap peut-il recouper le sien—si les griefs de Wittgenstein concernent le physicalisme–, leur conception du langage n'étant pas la même non plus et Wittgenstein n'ayant pas partagé le projet de science unitaire? D'ailleurs, l'article de Carnap a été traduit par Max Black par *The unity of science* en 1934, ce qui montre bien que le projet de Carnap était de montrer la possibilité d'une science unitaire sous forme phénoménaliste ou physicaliste, d'ailleurs, cela ne changeant rien au projet, que Wittgenstein n'avait jamais défendu ou apprécié.

Dans sa réponse à Schlick, Carnap mentionne justement que Wittgenstein ne s'est jamais intéressé au physicalisme. Ce que Wittgenstein nie en précisant dans une lettre à Schlick du 8 août 1932 qu'il a bien traité de physicalisme, mais pas sous cette «appellation épouvantable» et d'une manière très brève selon le style du *Tractatus*. Carnap aurait-il alors plagié le non dit, le suggéré ou l'insinué?

La question reste incompréhensible. Mais on peut essayer d'y trouver une réponse ou du moins une explication à partir de la philosophie post-*Tractatus* (dont je vais rappeler l'essentiel pour mon propos).

D'après Von Wright, le Wittgenstein post-*Tractatus* est absolument original et «ne reçoit aucune inspiration de l'extérieur» du type de celle qu'il aurait, d'après lui reçu de Frege et Russell, ou de qui que ce soit d'autre. Russell écrit lui même à propos des *Remarques philosophiques*, que «les théories qui apparaissent dans ce nouvel ouvrage de Wittgenstein sont neuves, très originales et sans aucun doute importantes. Sont-elles vraies? Je ne le sais. En tant que logicien, aimant la simplicité, je souhaiterais penser qu'elle ne le sont pas, mais si j'en crois ce que j'ai lu, j'ai la conviction qu'il faut lui donner la possibilité de les mener à leur terme, car une fois terminées, il est fort possible qu'elles apparaissent comme constituant une philosophie entièrement neuve» (Cf. Von Wright 1986, p. 36 note).

Kevin Mulligan ne serait pas d'accord avec ces évaluations et ces appréciations, car si après le *Tractatus*, Wittgenstein envisage la signification autrement, cette nouvelle façon d'envisager la signification était déjà en discussion chez plusieurs philosophes, tels que, en particulier, Max Scheler et Karl Bühler. Selon lui, Wittgenstein s'intéresse à des sujets, qui rompent avec la tradition issue de Frege, Russell, Carnap et Tarski, tels que « l'inséparabilité de la forme et du contenu de la poésie lyrique, l'expression et les exclamations… Ces phénomènes sont non seulement au centre de quelques philosophies austro-allemandes de la signification, mais ils intéressent également au plus haut point de nombreux écrivains de l'Autriche-Hongrie», et font qu'on peut parler «d'obsession autrichienne» pour certains thèmes. Quoi de plus normal alors que Wittgenstein soit aussi atteint par cette obsession généralisée et donc presque banale?

La philosophie post-*Tractatus* présente une nouvelle conception du langage qui n'est pas référentielle, même pas d'un point de vue théorique ou strictement logique (comme c'est le cas dans le *Tractatus*). La manière dont la philosophie du *Tractatus* évolue fait appel à une multitude de concepts intéressants. Se poser la question du caractère inédit ou pas de ces concepts ne peut pas être pertinent selon la conception post-tractarienne du langage.

Pour expliquer le fonctionnement de notre langage, l'idée la plus importante que Wittgenstein met en œuvre concerne le fait que le langage et, par conséquent, nos intentions, deviennent indissociables de formes de vie. Par l'exemple connu du langage entre un maçon et son ouvrier (Wittgenstein 2004, § 2), il vise à montrer justement que le langage aussi simple qu'il puisse être, est lié à une activité réelle, celle de la construction en l'occurrence. Ainsi, non seulement le signe n'est pas isolé et fait partie de tout un langage, comme il l'a bien expliqué dans *Grammaire philosophique* (1934), en particulier, mais de plus il fait partie d'une activité. C'est d'ailleurs, ce qui fait la différence entre le langage, les jeux et le calcul auxquels il a été comparé et associé. En effet, les jeux, les calculs et le langage ont certainement des points communs, mais ceci ne signifie nullement qu'on puisse les identifier, en ce sens que le jeu de langage, est défini comme étant «l'ensemble formé par le langage et les activités avec lesquelles il est entrelacé» (*idem*, § 7). Le langage, comme multiplicité de jeux de langage, est par conséquent, indissociable des activités, ils forment un tout.

Le début de *Recherches* est très clair à ce propos: Wittgenstein y critique la conception augustinienne de la signification, en mettant l'accent sur l'idée que les

signes ne désignent pas et n'ont pas pour fonction d'appliquer un mot à un objet, mais de permettre le partage d'une activité. La condition pour pouvoir partager un sens est donc le partage d'une forme de vie.

Ainsi, les jeux de langage sont, plus ou moins, complexes et par là même, des activités plus ou moins complexes leur correspondent. En réalité, il ne serait même pas correct de s'exprimer de cette manière car langage et activité forment un tout, il ne peut y avoir le langage d'un côté et l'activité qui lui correspondrait de l'autre, comme le montre la définition du jeu de langage que je viens de rappeler. Le sens est ainsi lié au contexte de son emploi, et se définit par l'usage ou plus exactement *il est l'usage*. Selon Wittgenstein, un langage, et donc une langue, en particulier, ne s'apprennent pas à l'école, cela ne suffit pas pour pouvoir la parler réellement, il faut la pratiquer en contextes et en situations réelles. Ce qu'on peut dire ne peut donc nullement être privé ou individuel. L'apprentissage met en œuvre des situations partagées.

Les mots n'ont précisément pas de définition mais des usages multiples, lesquels ne sont plus purement syntaxiques, comme dans le *Tractatus*. Wittgenstein compare le langage à une boîte d'outils, analogie assez répandue et déjà faite par Bühler, entre autres, dans laquelle chaque outil a une multitude inépuisable d'usages possibles (*Idem*, § 11), mais dont Wittgenstein a su tirer les conséquences, ainsi que les développements: la multiplicité des possibilités d'usage ne signifie pas que les usages que nous faisons des signes sont aléatoires et que le choix des signes est indifférent, de la même manière qu'un outil peut, certes, avoir plusieurs usages, mais pas n'importe lesquels, usages qu'on acquiert en vivant et agissant avec les autres. La multiplicité des usages dépend des situations et des activités auxquelles on participe et auxquelles on est confronté: on ne peut utiliser les mots d'une manière arbitraire ou selon son propre souhait, sous peine de compromettre toute communication.

Si la signification des mots n'est pas circonscrite (on ne peut pas définir les mots, d'après Wittgenstein, non pas parce qu'on ne sait pas le faire mais parce qu'il n'y a pas de définition) sans être pour autant libre ou arbitraire, comme le relève la comparaison avec les outils, comment la déterminer pour que nous puissions nous comprendre? Comment concilier l'absence de délimitation et la nécessité d'une certaine détermination, laquelle permettrait au langage d'accomplir sa fonction (de transmettre une pensée)?

La réponse à cette question n'est pas aisée, car le fonctionnement de notre langage est très complexe, en ce sens que le langage en tant que tel n'est pas l'élément le plus important. En effet, le fait que nous comprenons les intentions exprimées par un langage indirect, tels que la métaphore ou l'ironie, par exemple, malgré le décalage entre ce que nous voulons dire et ce que nous disons, entre le sens littéral et le sens voulu, prouve que le sens n'est pas exclusivement une question de langage. De plus, et par ailleurs, étant relié à la vie, le langage n'est pas statique; il ne peut être que vivant et dynamique (Wittgenstein 1980, § 17), c'est-à-dire que certains jeux disparaissent, certains usages deviennent complètement désuets et, en revanche, d'autres surgissent en rapport avec nos activités.

Ceci peut donner l'impression que ce sont nos activités qui mènent, en quelque sorte, le jeu: «Si les jeux de langage changent, changent les concepts et, avec les

concepts, les significations des mots» (Wittgenstein 1976, § 65). Le sens est ainsi bien pratique et non lexical. Qu'est-ce qui peut alors, dans ce cas, garantir suffisamment de stabilité pour permettre la communication, c'est-à-dire, pour que le sens puisse être partagé?

Pour Wittgenstein, c'est la grammaire qui est la garante du sens, c'est-à-dire que c'est par le biais de la grammaire et de ses règles que la distinction entre les usages corrects et ceux incorrects du langage pourra se faire. Tout d'abord, si la communication est possible, c'est parce que nous appliquons les mêmes règles ou plus exactement nous les appliquons de manières similaires.

Il est essentiel de rappeler que l'on ne suit pas une règle en solitaire et que cette opération de suivre une règle ne peut être singulière et doit se répéter (Wittgenstein 2004, § 199 et 202). On ne suit pas une règle une fois. Suivre une règle ou obéir à une règle est une action institutionnelle, une action sociale. Ainsi, lorsqu'on parle d'usages au pluriel, il faudrait entendre plutôt et plus exactement «coutumes». Si le langage est une pratique et une activité, on peut parler à ce moment là, d'influences et d'héritages sociaux et culturels plutôt que purement philosophiques.

Cette remarque confirme l'idée que, pour Wittgenstein, le langage est d'abord et en premier lieu une praxis institutionnelle. Lorsque nous parlons, nous avons l'intention de dire quelque chose, nous nous adressons alors à un interlocuteur, avec lequel nous devons partager les règles du langage certes, mais aussi et surtout des règles de son usage, et ce sont ces dernières qui nous permettent de communiquer. Cet accord est une condition pour que le message soit compris et qu'une réaction soit possible. Appliquer des règles suppose donc une communauté; il s'agit d'une *capacité sociale*, dont Wittgenstein a essayé d'expliquer le fonctionnement.

Ainsi, le langage est intimement lié à notre pratique sociale, à des coutumes et donc à « un arrière-plan ». Celui-ci englobe aussi bien les règles du langage et de ses usages que ce que Wittgenstein appellera le «patrimoine culturel» et qui nous permettra de saisir réellement le sens. Une autre rare définition de ce qu'est un jeu de langage précise que «nous appelons quelque chose un jeu de langage, si cela joue un rôle particulier dans notre vie» (Wittgenstein 1982, p. 29).

C'est la manière commune de réagir qui sert de référence et nous permet de comprendre une langue qui nous est étrangère par exemple. Cette idée rejoint la conception wittgensteinienne de la signification, développée assez tôt dans les années trente, à savoir que nous connaissons la signification d'un mot si nous savons l'utiliser comme d'autres l'utilisent. Pour apprendre un langage, il est nécessaire que les signes soient reliés d'une manière régulière et répétée à des activités, qui ne peuvent être isolées ou uniques mais qui, en même temps, se ressemblent.

Les règles nous mettent en quelque sorte sur les rails, elles nous donnent des indications, nous guident, selon Bühler (Cf. Mulligan 2004). C'est ce qui explique, que, d'après Wittgenstein, à cours de justification, on dira qu'on agit «juste ainsi» (*so handle ich eben*) (Wittgenstein 2004, § 217). Dans ce cas, si on tient à parler d'influence, il ne peut s'agir que d'influences sociales, coutumières et culturelles en général, lesquelles deviennent naturelles.

La pratique du langage et de la philosophie, entre autres, exige donc un arrière-plan commun faisant que certains acquis sont également nécessaires pour pouvoir

appliquer les mêmes règles d'une manière correcte et qui se manifeste dans les *coutumes* et les *habitudes* que nous acquérons en vivant avec les autres.

Il ne peut donc y avoir de sens et de pensée sans participation à la même vie. «Nous sommes tout à fait sûrs ne signifie pas seulement que chacun, isolément, en est certain, mais aussi que nous appartenons à une communauté dont la science et l'éducation assurent les liens» (Wittgenstein 1976, § 298). C'est parce qu'on vit en société, qu'on partage des formes de vie et des activités qu'on peut parler d'une manière sensée, se comprendre et donc penser, langage et pensée étant indissociables.

On se souvient que dans le *Tractatus*, Wittgenstein avait déjà souligné la nécessité de partager ses idées pour le comprendre, de même qu'en 1929–1930, il relevait qu'il ne faisait «plus qu'utiliser des vieilles idées» et en 1941 il continuait à penser qu'il faut «rassembler les matériaux anciens. Mais pour construire» (Wittgenstein 1984, p. 52). En même temps, il fait remarquer qu'il est obligé de se répéter souvent: «le premier mouvement enfile les pensées comme des perles, le second tend toujours à nouveau à la même chose». D'ailleurs, la lecture des textes de Wittgenstein donne souvent l'impression de répétion, mais en vérité les contextes d'écriture et de pensées sont différents.

Dans ce cas s'agit-il d'utiliser ses propres vieilles idées ou les idées d'autres sans qu'il soit nécessaire d'en préciser la provenance?

Etant donné la conception du langage comme usage dans le sens de coutumes, on ne peut laisser entendre que Wittgenstein serait un usurpateur car il a toujours défendu l'idée que toute activité est en dernière analyse sociale et que même la pensée n'est pas individuelle. Dans le *Tractatus*, il fallait avoir eu les mêmes idées pour comprendre le traité et plus tard, déjà en 1931 (*Idem* p. 19), il relève que ce qu'il écrit est réservé à un petit cercle, c'est-à-dire qu'il «s'adresse» à des hommes, qui ne constituent pas une sorte d'élite, mais qui «forment son cercle culturel», qui partagent donc la même forme de vie, le même jeu de langage.

On peut comprendre alors ici sa colère vis à vis de Carnap, laquelle n'est pas causée par son plagiat — à supposer qu'il y ait eu plagiat — mais par le fait qu'il refuse d'appartenir au même cercle. Si en 1931, en parlant de Spengler, il relève que «il aurait dû dire qu'il y a des ressemblances à l'intérieur d'une famille et aussi entre les membres de familles différentes» (*Idem* p. 24), il semble donc refuser toute ressemblance avec la famille néopositiviste, malgré tout ce qu'ils partagent, y compris la conception de la philosophie comme activité.

28.3 La philosophie comme activité

Dans la philosophie post-*Tractatus*, et déjà dans le *Tractatus*, la philosophie devient une activité visant à se débarrasser des maladies du langage et du non sens. Il en donne dans le *Tractatus* une définition assez claire, laquelle ne se heurte pas totalement à celle de *Recherches Philosophiques*. Selon les propositions 4, 112 à 4, 116,

- la philosophie s'oppose à la science: elle ne produit pas d'énoncés, mais clarifie et élucide. Elle ne présente donc pas de théorie, mais consiste plutôt dans une activité.
- L'analyse philosophique n'est pas psychologique, mais logique.
- Son rôle est de tracer les frontières du sens et par conséquent du non sens. C'est lorsqu'on veut aller au-delà du monde qu'on tombe dans le non sens, parce que, par là même, on veut dépasser le pensable.
- Langage et pensée sont liés: tout ce qui est pensé est exprimé clairement.

Cette conception de la philosophie a été largement reprise par Carnap et surtout Schlick, lequel s'inspire très clairement du *Tractatus* et plus particulièrement de la proposition 4,112 — sans que Wittgenstein ait eu à en redire —, en expliquant que «le but de la philosophie est la clarification logique des pensées. La philosophie n'est pas une théorie mais une activité. Une œuvre philosophique se compose essentiellement d'éclaircissements. Le résultat de la philosophie n'est pas de produire des 'propositions philosophiques', mais de rendre claires les propositions. La philosophie doit rendre claires, et nettement délimitées, les propositions qui autrement sont, pour ainsi dire, troubles et confuses» (Schlick 1979, p. 171).

Elle s'occupe ainsi d'énoncés déjà établis et n'en constitue pas d'autres. Elle est un art, une activité qui permet la clarification. Wittgenstein avait montré que l'erreur de la métaphysique, en particulier, est de croire que l'on peut dire l'indicible et exprimer ce qui dépasse les limites de l'expérience et de la pensée. Il a donc toujours soutenu que la philosophie est une thérapie et doit soigner ceux qui s'écartent des règles qu'elles soient logiques ou grammaticales.

La méthode de *Recherches Philosophiques* contraste clairement avec toute théorie, c'est pourquoi Wittgenstein remarque lui-même que la difficulté de son livre n'est pas une difficulté d'ordre théorique, mais concerne plutôt un changement d'attitude. Ainsi, pour Wittgenstein, la philosophie n'a jamais été connaissance ou doctrine de quelque nature que ce soit. Elle était dans le *Tractatus* une activité d'élucidation et devient dans sa philosophie plus tardive une activité thérapeutique. En effet, toute thérapie implique la personne, c'est une méthode active, c'est un long processus de travail sur soi, dont le but est de découvrir la nature d'un problème. Le lecteur de Wittgenstein est d'ailleurs, vraiment impliqué, engagé et actif dans la réflexion. Il n'est pas influencé, mais participe à l'activité de la pensée. Wittgenstein, tout comme le lecteur, ne pense pas individuellement et il devient tout à fait normal, lorsqu'on a pris largement connaissance de la philosophie autrichienne, comme c'est le cas pour Kevin Mulligan (3ème conférence, Montréal, 2010) de constater des interférences et des recoupements, faisant, par exemple que «si Marty, Bühler et Wittgenstein explicitent souvent l'idée que les mots ont des fonctions en les décrivant comme des outils, Scheler nie que les mots sont essentiellement des outils» ou que «comme Meinong, Wittgenstein ne pense pas…» ou encore que «comme Bühler, Wittgenstein pense que ce qui représente n'est pas forcément linguistique..»… mais aussi de relever, et c'est le plus intéressant, des divergences entre ces *interlocuteurs*. C'est ainsi que «les descriptions que donnent Bühler et Wittgenstein de l'emploi des mots, de leurs fonctions, buts et contextes, divergent sur un point capital» (*Idem*) et que «malgré de profondes similitudes entre leur analyses, Bühler et Wittgenstein arrivent à des conclusions apparemment

différentes» (Mulligan 2004) et ce, à propos de leur réfutation de la thèse selon laquelle «le langage a une essence cachée».

28.4 Conclusion

S'il est difficile de parler d'un héritage dont Wittgenstein aurait pu tirer profit ou même inspiration, d'une part, parce qu'il juge la question inintéressante car il est tout à fait normal et dans le cours des choses de penser dans une tradition ou contre elle, préoccupée par des problèmes plus ou moins spécifiques, et d'autre part, parce qu'il aura fait de cet héritage quelque chose de nouveau—ce en quoi consiste «son génie»–, alors, il est difficile également de parler de plagiat; d'autant plus que Wittgenstein affirme la nécessité de partager ses idées et ses pensées pour pouvoir le comprendre. Cette même idée sera développée avec force après le *Tractatus*, puisque le sens et la communication ont pour condition un arrière plan culturel, scientifique et social et une forme de vie. C'est ce partage qu'il semble refuser avec Carnap. Il n'est pas important, au contraire, de citer ses références, qu'elles soient philosophiques ou autres, lorsqu'on fait partie de la même communauté, puisqu'il s'agit de la même activité et du même jeu de langage.

La pensée est individualisée de façon socialisée, si je puis m'exprimer ainsi. Lorsqu'on appartient à la même communauté, il devient inutile de parler d'influence, car le langage, le sens et donc la pensée ne sont finalement pas individuels et particuliers et comme le fait si bien remarquer Kevin Mulligan, les affirmations de Wittgenstein «ont une préhistoire et une suite autrichiennes», avec Meinong, Husserl, Müsil, Bühler ….et Wittgenstein peut très bien confectionner un mur à sa façon avec «les briques de Bühler». C'est dans ce sens qu'il fait «du neuf» avec «du vieux» en pensant toujours avec les autres.

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Chapter 29
Wittgenstein on Heidegger and Cosmic Emotions

Mathieu Marion

Abstract Wittgenstein commented briefly on Heidegger in a conversation in 1929 with Schlick and Waismann and in a dictation to the latter from the former in 1932. In this chapter, I set forth one minor historical argument against current, pragmatist readings that lump together Wittgenstein and Heidegger, an argument which involves reconstructing the context of Wittgenstein's remarks to see their intended point. I thus show that Wittgenstein's remarks were prompted by his having read Heidegger's inaugural lecture 'What is metaphysics?' (1929), and only that text. I argue from this that Wittgenstein never saw himself engaged in the sort of metaphysical enterprise he was engaged into and briefly examine his claims in 1932 that Heidegger needs a therapy analogous to psychoanalysis, and that his speaking 'whereof one should remain silent' amounts to a stylistic (hence moral) mistake.

Keywords Wittgenstein · Heidegger · Emotions · Metaphysics · Negation

At least, since Richard Rorty's *Philosophy and the Mirror of Nature,*[1] it has been common in the USA to group together the later Wittgenstein and Heidegger in a narrative of twentieth-century philosophy that pits them against analytic philosophy narrowly conceived, in terms of a tradition that derives its concepts, problems, and methods, mainly from Frege, Russell, Ramsey, and Carnap—a tradition for which we can use Robert Brandom's expression 'the classical project of analysis'.[2] Since

[1] (Rorty 1980). In these opening remarks, I mention only attempts at relating Wittgenstein and Heidegger that are related to Rorty's; I am of course aware that there are others, perhaps less influential—see, e.g. Mulhall (1990) for whom Heidegger's Zuhandenheit also plays a key role—but this chapter is not an overview of the literature.

[2] Brandom characterized the 'classical project of analysis' as aiming to 'exhibit the meanings expressed by various target vocabularies as intelligible by means of the logical elaboration of the meanings expressed by base vocabularies thought to be privileged in some important respects—epistemological, ontological, or semantic—relative to those others' (Brandom 2008, p. 3). The hope was that by so doing, one will have 'analysed away' the conceptual difficulties raised by the target vocabulary (Brandom 2008, p. 2). Phenomenalism, for example, would fall under that description as the project of reducing the physicalist target vocabulary of how things objectively

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this is an all American affair, Dewey is often invoked alongside Wittgenstein and Heidegger,[3] and the lot is by the same token labelled as 'pragmatists'. Although Rorty sounds at times as if he merely classified Dewey, Wittgenstein, and Heidegger as the 'great edifying, peripheral thinkers' of our times (Rorty 1980, p. 368), substantive links have been drawn. For example, there is an American 'pragmatist' reading of Heidegger, notoriously revolving along key moves such as the appropriation of Heidegger's distinction between '*Zuhandenheit*' ('readiness-to-hand' or 'handiness') and '*Vorhandenheit*' ('presence-at-hand'), a reading that first gained notoriety in the philosophy of cognitive science with the work of Hubert Dreyfus and John Haugeland.[4]

This view of the matter has received renewed currency recently in, e.g. Brandom's John Locke Lectures *Between Saying and Doing* where he argues that 'the most significant conceptual development in this tradition [the 'classical project of analysis', M.M.]—the biggest thing that ever happened to it—is the *pragmatist challenge* to it' (Brandom 2008, p. 3). A challenge, we are now told, that was initiated by Dewey, Wittgenstein, and Sellars. The narrative being confined to 'analytic' philosophy, Heidegger does not get mentioned, but Brandom predictably drafts him in a paper entitled 'Dasein, the Being that Thematizes', published in *Tales of the Mighty Dead,* in which we are told that '*Being and Time* can be understood as propounding a normative pragmatism'—incidentally, this paper drew a sharp rebuke by the late John Haugeland, who had been an initiator of this sort of reading (see Brandom 2002, p. 324. For Haugeland's critique, see Haugeland 2005).

The contrast that Brandom wanted to draw, overlapping as it does his distinction between 'representationalism' and 'inferentialism', may have intrinsic interest, but this is not the place to discuss this. It is the historical picture on the basis of which it is presented that I find deeply suspicious. It would be wrong to see such narratives as mere descriptions of the course of twentieth-century philosophy, analytic or not. There is an underlying agenda here and this narrative is nothing but pure ideology. As is usually the case with ideology, it distorts what it purports to represent, and certainly does not help us improve our understanding of either Heidegger or Wittgenstein. It just serves to legitimize uses of their names and views—insofar as these are distorted in order to fit the narrative—within a context that was not theirs. It is also currently fashionable to see things this way because of the widely felt need to undercut the false dichotomy between 'analytic' and 'continental' philosophy. But if the distinction is (historically) a false one, then it was already an ideological distinction and it seems to me rather wrongheaded to fight it with another piece of ideology.

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are to the phenomenalist base vocabulary of how things appear. Another important feature, according to Brandom, is the privileged role given to logic in this reduction of the target into the base vocabulary.

[3] Again, since Rorty's book. See, e.g. its introduction (Rorty 1980, pp. 3–13).

[4] For their writings on Heidegger, see, e.g. Haugeland (1982) or Dreyfus (1990). My point here is not, however, to dismiss altogether all that goes under the name 'pragmatist reading'; there are some very valuable studies, e.g. Blattner (1999).

It is of course impossible to undermine this picture within a single chapter, so I shall resort to the study of only one aspect, namely Wittgenstein's own comments on Heidegger. These comments have an argumentative context that must be reconstructed so that one see the point of making them, a bit like a reconstruction of a chess game allows one to understand the point of a given move, over and above the fact that it was made in accordance with the rules of the game. I propose to do this while providing by the same token a small contribution to Wittgenstein scholarship: I shall show that his comments prove that he had only read Heidegger's 'What is Metaphysics?', the text of his inaugural lecture, delivered on July 24, 1929 at Freiburg (Heidegger 1976). It has been a pleasure and privilege to have known Kevin Mulligan for so many years and, although I have steered away from areas in the history of philosophy in which he made so many seminal contributions—in short Austrian philosophy from Bolzano to Wittgenstein—wanting to find my own niche, so to speak, I was greatly helped through the years by his kind, astute advice and vast historical knowledge. The issues raised by Wittgenstein comments on Heidegger involve one topic to which he contributed enormously, emotions. As a matter of fact, it involves a peculiar sort of emotions; using Henry Sidgwick's expression, popularized by W. K. Clifford, I shall call them 'cosmic emotions'.[5] These are, Clifford tells us, emotions 'felt in regard to the universe or sum of things, viewed as a cosmos or order' (Clifford 1886, p. 394). It gives me added pleasure, therefore, to offer this contribution to scholarship in honour of Kevin.

The point of my contribution is to show that, given an appropriate understanding of their contexts, Wittgenstein's comments on Heidegger indicate that he did not see himself as engaged in a philosophical enterprise which could be, even remotely, associated with that of Heidegger. It is true that in his remarks, Wittgenstein appears to presuppose a similar starting point, so to speak, but they go in diametrically opposite directions and he singles out Heidegger as *ripe for a psychoanalytic therapy* and as *a prime example of (ethically) bad taste in philosophy*. No redescription of them in 'pragmatist' terms can obviate this, because, from a standpoint such as Wittgenstein's (which should be, again, clearly distinguished from the agenda of his commentators), nothing Heidegger has to say is receivable. The reverse is, arguably, also true.[6]

No amount of fudge can disguise the fact Heidegger never wrote with the intention to provide contributions to problems in, say, contemporary 'analytic' philoso-

[5] Clifford mentions indeed Sidgwick as having coined the expression 'cosmic emotion' (Clifford 1886, p. 394), but he did not provide any reference. I was not able to find that expression in Sidgwick's writings, but a letter from Clifford to Sidgwick kept at Trinity College, Cambridge (Trinity/Add.Ms.c/93), and dated November 25, 1877, indicates that Clifford remembers Sidgwick using it in conversation sometime before 1871.

[6] See, e.g. Morrison (1969) for an early paper or, on the same topic, the more detailed Dahlstrom (2001). Since I discuss Carnap's critique of Heidegger in 'The Elimination of Metaphysics through the Logical Analysis of Language' (Carnap 1931b), I should also point out that Heidegger replied to Carnap in both a postscript to 'What is Metaphysics?' reprinted in Heidegger (1976) and in his 1935 lectures published as Heidegger (1983). For a discussion of a possible Heideggerian rejoinder to Carnap, see Philipse (1998, pp. 9–15).

phy of language or the philosophy of cognitive science. This is perhaps an obvious thing to say, but Heidegger's pronouncements were exactly of the sort of 'metaphysics' that has been abandoned in 'analytic' philosophy, narrowly conceived, i.e. within the 'classical project of analysis', or even more widely conceived; they have certainly nothing to do with the current revival of metaphysics within 'analytic' philosophy. To refer to Carnap's classic paper 'The Elimination of Metaphysics through the Logical Analysis of Language', published in 1931, what I mean here is that no one would use any statement by Heidegger as a 'working hypothesis' (Carnap 1931b, p. 232/72). Such statements would, by any 'analytic' standard, be judged defective in many respects, including for the lack of supportive arguments—arguments, however poor, are not always lacking; there is, for example, an appeal to 'cosmic emotions' in the passages discussed below—or simply because of their failed attempt at forming a 'theory'. One should recall here that Carnap characterized metaphysics in his 1932 paper in exactly those terms:

> […] through the form of its works it pretends to be something that it is not. The form in question is that of a system of statements which are apparently related as premises and conclusions, that is, the form of a theory. (Carnap 1931b, p. 240/79)

This is certainly reminiscent of Wittgenstein and a *rapprochement* here is a delicate matter, but for the moment, it is worth emphasizing that, although one would now insist that Carnap's critique was flawed because of its reliance on a principle of verifiability, Heidegger's pretence has been exploded: A phrase such as '*Das Nichts nichtet*'—translated as 'The nothing itself nihilates' or 'The nothing noths' below—does *not* describe anything, and it cannot be said to form part of any 'theory' in any legitimate sense of the word. But it had been Heidegger's intention that this would be a description forming part of a theory—a theory that he even claimed to be more 'rigorous' than science.

Still, some might argue that there is a sort of 'non-metaphysical'[7] reading of Heidegger's remarks under which they become somehow more palatable. But even if one were to make sense within a contemporary 'non-metaphysical' context of some of Heidegger's pronouncements, we are still owed reasons why we should endorse them. This is why it is ironic to use phrases every bit like '*Das Nichts nichtet*' suitably misconstrued as 'pragmatic' theses within a 'pragmatic' critique of the 'classical project of analysis'; that Heidegger is thus misrepresented as having said, say, *p* may be fine, but it is no argument in favour of *p*. (This points to a conclusion of a more general nature about some recent uses of history of philosophy.)

Given that Wittgenstein thought that, by saying *p,* Heidegger was in need of a therapy and displaying bad taste, one is even tempted to say that the fact that Heidegger said *p* is in itself an argument against *p*. I would not go that far, however, because Wittgenstein's reasons are highly idiosyncratic and not likely to be shared. Furthermore, Wittgenstein's critique (or Carnap's for that matter) may involve a misunderstanding of Heidegger. This may be true, so followers of Heidegger need

[7] I am thinking of the type of reading fostered since Hartmann (1976) about Hegel, to which the 'pragmatic' readings of Heidegger mentioned above belong.

not be shocked at all with the following; it is open to a rejoinder. I will not deal with the question whether Wittgenstein understood Heidegger correctly, because it seems to me the least interesting aspect of his comments on Heidegger. Like almost anything else he wrote or reportedly said, these comments are interesting primarily in what they tell us about Wittgenstein himself.

Not that they were particularly cosmopolitan, but Wittgenstein and Heidegger lived in philosophical worlds that were already far apart, and there were very few reasons why they would have encountered each other's work. There is only one reference to Wittgenstein in Heidegger's work, a deliberate misquotation of the *Tractatus*' first sentence in one of his last seminars (Heidegger 2003, p. 35), and Wittgenstein commented on Heidegger only twice, on both occasions rather briefly. The first occasion was a conversation in Vienna with Schlick and Waismann, which took place in December 1929, of which Waismann recorded a few lines in Gabelsberger shorthand (Wittgenstein 1967, pp. 68–69). The second occasion is in a section entitled '*Über den Charakter der Beunruhigung*' or 'On the Character of Disquiet', which forms part of a dictation to Waismann known as the *Diktat für Schlick* (Wittgenstein 2003, pp. 68–77). (Section titles are not, however, from Wittgenstein.) According to Gordon Baker (Wittgenstein 2003, p. xvi), this dictation probably took place 3 years later in December 1932, but it might actually date from 1933–1934.[8] Heidegger is not mentioned by name in this section, but the phrase '*Das Nichts nichtet*' occurs three times (Wittgenstein 2003, pp. 68, 73 and 75), which comes from Heidegger's 'What is Metaphysics?'.[9] As a matter of fact, it is the only specific phrase discussed and the whole section might be seen as a commentary on Heidegger's inaugural lecture. Indeed, that section opens also with a mention of the question: '*Was ist früher, das Nichts oder die Verneinung?*' (Wittgenstein 2003, p. 69), which is also central to Heidegger's 'What is Metaphysics?', as we shall see.

Although Wittgenstein dictated to Waismann the content of the *Diktat für Schlick,* it is Waismann who is responsible for its final wording. For this reason, one might doubt that the *Diktat* faithfully represents Wittgenstein's views. After all, Waismann's editorial interventions may have twisted the meaning of Wittgenstein's remarks, bringing them closer to those of the Vienna Circle than they really were.[10] Given that the *Diktat* was written after the publication of Carnap's 'The Elimination of Metaphysics through the Logical Analysis of Language', where the phrase '*Das Nichts nichtet*' famously comes in for critical analysis (Carnap 1931b, p. 229/69), it is thus quite possible that Wittgenstein did not think of Heidegger at all when dictating the content of this passage to Waismann and that it is the latter who introduced Carnap's own example, in order to bring Wittgenstein's comments in line with those of Carnap and Schlick's circle. I shall give below reasons to believe that, although the worry about the authorship of the *Diktat* is, of course, a legitimate one, this cannot be the case and the section on 'On the Character of Disquiet' can legitimately

[8] According to Joseph Rothhaupt (private communication), there are important similarities with the book formed by MS 140, MS114(II), and MS115(I).

[9] The actual phrase is: 'Das Nichts selbst nichtet' (Heidegger 1976, p. 114/103).

[10] This worry was raised to me by Joachim Schulte in conversation.

be taken as faithfully representing Wittgenstein's views.[11] Moreover, the views expressed in that section, although bearing some resemblance with those of Carnap, diverge significantly on other aspects, and these differences, I hope to show, form precisely what is interesting, i.e. revelatory about Wittgenstein in this passage.

One might legitimately ask: What text was Wittgenstein reacting to? What prompted his comments? Surprisingly, very little attention has been given to these questions. The occurrence of the phrase '*Das Nichts nichtet*' in the *Diktat* gives us a good idea but, as we just saw, the point is moot. The shorthand transcript of the December 1929 conversation begins thus:

> To be sure, I can imagine what Heidegger means by being [*Sein*] and anxiety [*Angst*]. Man feels the urge to run up against the limits of language. Think for example of the astonishment that anything at all exists. This astonishment cannot be expressed in the form of a question, and there is no answer whatsoever. Anything we might say is *a priori* bound to be mere nonsense. Nevertheless we do run up against the limits of language. […] This running up against the limits of language is *ethics*. (Wittgenstein 1967, p. 68)[12]

The editor of Waismann's notes, Brian McGuinness, cites in a footnote a passage from § 40 of Heidegger's *Being and Time* (Heidegger 1977, pp. 184–191) as a possible source for Wittgenstein's comment:

> *That about which one has* Angst *is being-in-the-world as such*. How is what Angst is anxious about phenomenally differentiated from what fear is afraid of? What *Angst* is about is not an innerworldly being […] *What* Angst *is about is the world as such*.[13]

If this is meant to provide an idea of the text that formed the basis of this conversation, there are reasons to think that this is misleading, and that it is instead to Heidegger's inaugural lecture, 'What is Metaphysics?', that Wittgenstein is reacting.[14] This passage was probably chosen because it relates Heidegger's concepts of 'being' and 'anxiety', mentioned by Wittgenstein, with the view of the world *sub specie aeternitatis,* within which the latter indeed thinks about these issues, as we shall see. But it implies knowledge of Heidegger's *Sein und Zeit* at least up to § 40, which is difficult to understand on its own, and it seems to me extremely unlikely that Wittgenstein had first-hand knowledge of that book or even that Schlick or Waismann brought the book with them and made him read sufficient parts of the

[11] To answer the previous point, there is no reason on the other hand not to think that Wittgenstein deliberately chose the phrase 'Das Nichts nichtet'.

[12] A sentence is omitted because it refers to Kierkegaard, a proper analysis of it would needlessly complicate matters here.

[13] 'Das Wovor der Angst is das In-der-Welt-Sein als solches. Wie unterscheidet sich phänomenal das, wovor die Angst sich ängstet, von dem, wovor die Furcht sich fürchtet? Das Wovor der Angst ist kein innerweltliches Seiendes. […] das Wovor der Angst ist die Welt als solche' (Heidegger 1977, pp. 186–187/174–175). The translation cited in Wittgenstein (1979, 68 n.25) is from an earlier translation, now superseded by Heidegger (1996); I merely quoted here the same phrases but in the newer translation. Given how controversial translations of Heidegger are, I have resorted to quoting the original in footnotes. I believe, however, there are no serious translation problems raised with the passages discussed in this paper.

[14] Joseph Rothhaupt had already made a similar claim in Rothhaupt (2008, Sect. 9.2).

book on the spot. By contrast, 'What is Metaphysics?' is a short and relatively self-standing text.

Furthermore, Heidegger speaks in the above quotation of the disclosure or revelation through '*Angst*' of our 'Being-in-the-world' or '*In-der-Welt-sein*',[15] a notion not alluded to by Wittgenstein. Heidegger also makes numerous other claims in § 40 on behalf of this highly non-ordinary concept of '*Angst*' as a 'disclosive attunement', e.g. that it reveals *Dasein* as 'being free for', etc. (Heidegger 1977, p. 188/176). The upshot of the discussion in *Being and Time* is the idea that through '*Angst*' one realizes that one is thrown into the world and that one must therefore face head-on the eventuality of one's death.[16] Again, none of this is alluded to by Wittgenstein, who speaks instead of the 'urge to run up against the limits of language' and 'the astonishment that anything at all exists', none of which being mentioned in § 40.

[15] Amazingly enough, Heidegger is not responsible for the first occurrence of 'In-der-Welt-sein'. Wanting to teach some basic ideas about Daoism, Zen, and the tea ceremony to Americans, as he was living in America at the time, Kakuzo Okakura wrote *The Book of Tea*, published in 1906 and now considered a classic on Japanese aesthetics. In Chap. 3, he described some central ideas of Daoism in those terms: 'Chinese historians have always spoken of [Daoism] as the 'art of being in the world', for it deals with the present—ourselves. It is in us that God meets with Nature, and yesterday parts from tomorrow. The Present is the moving Infinity, the legitimate sphere of the Relative. Relativity seeks Adjustment; Adjustment is Art. The art of life lies in a constant readjustment to our surroundings. [Daoism] accepts the mundane as it is and, unlike the Confucians and the Buddhists, tries to find beauty in our world of woe and worry' (Okakura 1964, pp. 23–24). Okakura translated here 'Shosei' by 'art of being in the world'; this being the sole occurrence of the expression in the whole book. This English expression was in turn translated into German as 'Kunst des in-der-Welt-Seins' in *Das Buch vom Tee*, published in 1919 (Okakura 2002, p. 45). Kichinosuke Ito, a Japanese student who had hired Heidegger for private tuition, gave him a copy of this translation and, since, it is felt in Japan that Heidegger did not acknowledge his source. Tomonobu Imamichi, who had been a student of Ito, recounts the story as follows in his autobiography: 'Ito Kichinosuke, one of my teachers at university, studied in Germany in 1918 immediately after the First World War and hired Heidegger as a private tutor. Before moving back to Japan at the end of his studies, Professor Ito handed Heidegger a copy of *Das Buch vom Tee*, the German translation of Okakura Kakuzo's *The Book of Tea*, as a token of his appreciation. That was in 1919. *Sein und Zeit* (*Being and Time*) was published in 1927, and made Heidegger famous. Mr. Ito was surprised and indignant that Heidegger used Zhuangzi's concept without giving him credit. Years later in 1945, Professor Ito reminisced with me and, speaking in his Shonai dialect, said, 'Heidegger did a lot for me, but I should've laid into him for stealing'. There are other indications that Heidegger was inspired by Eastern writings, but let's leave this topic here. I have heard many stories of this kind from Professor Ito and checked their veracity. I recounted this story at a reception held after a series of lectures I gave in 1968 at the University of Heidelberg at the invitation of Hans-Georg Gadamer. Japanese exchange students attended these lectures, and I explained that there were many other elements of classical Eastern thought in Heidegger's philosophy and gave some examples. I must have said too much and may even have said that Heidegger was a plagiarist (Plagiator). Gadamer was Heidegger's favorite student, and we ended up not speaking to each other for 4 or 5 years because he was so angry with me' (Imamichi 2004, pp. 123–124). See also Imamichi (2008, p. 436). Maybe the two notions diverge, but it remains that the first occurrence of the concept was in…English, which is odd from Heidegger's point of view, given that he never even considered English as a philosophical language.

[16] This comes out clearly in Heidegger (1977, § 53).

It seems better, therefore, to explore the idea that Schlick and Waismann simply brought to the December meeting a copy of Heidegger's 'What is Metaphysics?' and read from it. Close attention to what Wittgenstein says, including in the lines quoted above, reveals that he is indeed referring to that text.[17]

Before coming to that, however, it is worth pointing out some facts about the year 1929, at the very end of which that conversation took place. These will be the key events for our purposes:

- In March–April, an '*Arbeitsgemeinschaft*' takes place at Davos, Switzerland, where Heidegger debated with Ernst Cassirer on the interpretation of Kant's philosophy.
- On July 24, Heidegger gives his inaugural lecture at the University of Freiburg; it was published during the summer, in Bonn, as 'What is Metaphysics?'.
- On November 17, Wittgenstein delivers his 'Lecture on Ethics' at the Heretics Society in Cambridge.
- On December 30, Wittgenstein meets Schlick and Waismann in Vienna and discusses Heidegger.

The meeting at Davos brought together numerous philosophers from across Europe, e.g. from France, Léon Brunschvicg, Jean Cavaillès, Maurice de Gandillac, and Emmanuel Lévinas. For that reason, it was a rather significant event, even though its precise significance—usually described in terms of the young Heidegger having publicly slain the last representative of Neo-Kantianism, thus drawing an era in German philosophy to a close—is open to debate (see, e.g. Friedman 2000 or Gordon 2010). As it turns out, Carnap also attended the *Arbeitsgemeinschaft,* and he even took the opportunity to have private conversations with Heidegger. As a matter of fact, he even felt initially attracted towards Heidegger, whom he described in his diaries as 'serious and objective' ('*Sachlich*') and 'very attractive'. He even claimed to have convinced. Heidegger of the universality of physicalist language, during a conversation which took place in a café![18]

So, we know that Carnap was not just vaguely aware of Heidegger's existence, but personally acquainted with him as well as a direct witness to his growing reputation within the German-speaking philosophical community as the result of the debate at Davos. That Heidegger was to take Husserl's chair at Freiburg in the following month could only have increased his prestige. But the publication of his inaugural lecture, 'What is Metaphysics?', later on during the summer must have alarmed Carnap, and the rest of the Vienna Circle by the same token, as it contained a virulent attack on logic. Indeed, Heidegger distinguishes in his lecture between to meanings of 'negating'—in the idiom of the English translation: between two ways of 'nihilating'—these being the metaphysical '*Nichts*' or 'nothing' and the '*Verneinung*' or 'negation' of logic, and then claims literally to have 'proved' the following 'thesis':

[17] The earliest correct identification of 'What is Metaphysics?' as the source for Wittgenstein's remarks that I know of is Murray (1974).

[18] These passages are quoted in Friedman (2000, p. 7).

> […] The not does not originate through negation; rather, negation is grounded in the not that springs from the nihilation of the nothing. […] In this way the above thesis in its main features has been proven: the nothing is the origin of negation, not vice-versa.[19]

And this 'thesis' implies, in his mind, no less than the disintegration of logic:

> If the power of the intellect in the field of enquiry into the nothing and into Being is thus shattered, then the destiny of the reign of 'logic' in philosophy is thereby decided. The idea of 'logic' itself disintegrates in the turbulence of a more original questioning.[20]

One will have noticed, *en passant,* that Heidegger himself seems not to have noticed that, if logic is thus disintegrated, then his own claim to have 'proved' the above 'thesis' becomes utter nonsense. However, since metaphysics is now said to reside in an '*abgründiger Grund*', Heidegger was led to an even more fanciful claim:

> The presumed soberness of mind and superiority of science becomes laughable when it does not take the nothing seriously.[21]
> […] no amount of scientific rigor attains to the seriousness of metaphysics.[22]

And one should not forget either that the above 'thesis' that '*das Nichts*' is prior to '*die Verneinung*' was part of Heidegger attempt at rejecting the principle of non-contradiction, as being merely an act of the intellect ('*Verstandeshandlung*'), so that one is now presumably free to think without that constraint (Heidegger 1976, pp. 107–108/97)…[23]

Such claims must have baffled the Viennese. Carnap's initial attraction towards Heidegger, which was quite normal given their shared opposition to the particular Neo-Kantian philosophy represented by Cassirer, must have given place, in light of Heidegger's recent apotheosis in Davos and Freiburg, to some amount of anxiety: initially looking a likely ally, he turned out to be the arch-enemy and a dangerously popular and well-respected one at that. There is also another cause of concern, the political dimension. It is a matter of dispute how well known Heidegger's political views were in 1929 or even if he had any, as the official line has it that he did not until shortly before he became rector in 1933 (and then only until very shortly after he resigned). Michael Friedman, who insists on the importance of the cultural and political context to our understanding of Carnap's reaction to the *Arbeitsgemeinschaft* (Friedman 2000, p. 15), provides evidence, however, that Neurath and

[19] 'Das Nicht ensteht nicht durch die Verneinung, sondern die Verneinung gründet sich auf das Nicht, das dem Nichten des Nichts entspring. […] Hierdurch ist in den Grundzügen die obige These erwiesen: das Nichts ist der Ursprung der Verneinung, nicht umgekehrt" (Heidegger 1976, pp. 116–117/105).

[20] 'Die Idee der »Logik« selbst löst sich auf im Wirbel eines ursprünglicheren Fragens*'* (Heidegger 1976, pp. 117/105).

[21] 'Die vermeintliche Nüchternheit und Überlegenheit der Wissenschaft wird zur Lächerlichkeit, wenn sie das Nichts nicht Ernst nimmt'(Heidegger 1976, pp. 121/109).

[22] '[…] erreicht keine Strenge einer Wissenchaft den Ernst der Metaphysik' (Heidegger 1976, pp. 122/110).

[23] Jacques Derrida also made a similar claim, on behalf of Heidegger, about another form of consistency differing from 'classical logico-metaphysical consistency'. However, when asked what he meant, he simply replied 'I cannot tell you what it is' (Lacoue-Labarthe & Nancy 1981, p. 52).

Carnap were aware of Heidegger's politics dating from 1931 and 1932. Certainly, there is no trace of awareness of Heidegger's politics in Carnap's diaries of April 1929, but it is quite clear from later passages from his diaries, quoted by Friedman (Friedman 2000, pp. 20–22), that by 1931 he had chosen Heidegger as the target of his critique of metaphysics, in 'The Elimination of Metaphysics through the Logical Analysis of Language', partly for political reasons. This shows that the claim that Heidegger had no such views prior to 1933 is at best dubious (otherwise how would others be aware of them?), but still does not show that this was already cause for extra worries for Carnap and the Vienna Circle as early as the summer of 1929.[24] On the other hand, the Viennese social scientist and philosopher Othmar Spann, also seen as an enemy by Carnap and Neurath, was already quite vociferous by 1929, and it is possible that Carnap and Neurath saw the political implications of Heidegger's philosophy very quickly. After all, the critique of logic and the principle of non-contradiction in 'What is Metaphysics?' *is* a politically very dangerous form of *irrationalism*. At all events, these political innuendos, if any, did not carry over to Wittgenstein's comments and I shall not discuss them further.[25] (One consolation is that, although he refrained from displaying any political awareness, Wittgenstein was on the right side.)

The foregoing gives good reasons to believe that Schlick and Waismann were anxious to hear what Wittgenstein had to say about Heidegger when they met at the end of the year. This still does not tell what specific text they read at that meeting. For this, we have to turn to internal evidence. But before doing this, I should say a few words concerning another event in the list above, Wittgenstein's 'Lecture on Ethics' (Wittgenstein 1993, pp. 37–44) in November. Indeed, in order to see that Wittgenstein actually refers to 'What is Metaphysics?' in his December meeting with Schlick and Waismann, we need to understand how he recast Heidegger's claims in his own terms; terms that he had fresh in mind a month after giving that lecture.

Much of the 'Lecture on Ethics' is devoted to making a distinction between 'relative' and 'absolute' good (more generally, 'relative' and 'absolute' value) as well as to the claims that the 'absolute good' cannot be a state of affairs, that 'a certain

[24] It is also worth recalling that Heidegger's reaction to Carnap's 1931 paper was, on the other hand, overtly and deeply political. He had the presence of mind in 1953 to cull out from the printed version of his 1935 lectures, *Einführung in der Metaphysik*, a passage explicitly dealing with it—but eventually printed in the *Gesammtausgabe* edition of that work and quoted since in Friedman (2000, pp. 21–22)—where he described Carnap's philosophy as standing 'in internal and external connection with Russian communism' as well as celebrating 'its triumph in America': 'Kein Zufall ist auch, daß diese Art »Philosophie« im inneren und äußeren Zusammenhang steht mit dem russischen Kommunismus. Kein Zufall ist ferner, daß diese Art des Denkens in Amerika seine Triumphe feiert' (Heidegger 1983, p. 228). The theme of the planetary role of Germany against Western liberalism and Eastern communism was standard Nazi propaganda. On a more philosophical note, Heidegger describes it as leading 'to the definitive profaning of the world': 'Diese Auffassung der Warheit als Sicherung des Denkens fürhte zur endgültigen Entgötterung der Welt' (Heidegger 1983, p. 228). This suppressed section, along with numerous other ones, show that Heidegger had not given up his Nazi sympathies after he resigned from the Rectorate.

[25] For a more detailed discussion, see Friedman (1996, 52 f.) or Chap. 2 in Friedman (2000).

characteristic misuse of our language runs through *all* ethical and religious expressions' (Wittgenstein 1993, p. 42), etc. Wittgenstein concluded his lecture with these words:

> I see now that these nonsensical expressions [purporting to express some absolute value, M.M.] were not nonsensical because I had not yet found the correct expressions, but that their nonsensicality was their very essence. For all I wanted to do with them was just *to go beyond* the world and that is to say beyond significant language. My whole tendency and I believe the tendency of all men who ever tried to write or talk Ethics or Religion was to run against the boundaries of language. (Wittgenstein 1993, p. 44)

We can easily see that this is exactly what Wittgenstein says in relation to Heidegger in December:

> To be sure, I can imagine what Heidegger means […] Man feels the urge to run up against the limits of language. […] Anything we might say is *a priori* bound to be mere nonsense.

But, contrary to what some might wish us to believe, this is not yet indicative of any approval of Heidegger. (Nor does this tell us what text Wittgenstein is commenting upon!) To see this, we need to look at the part elided in this last quotation and consider first, the part of Wittgenstein's argument in the 'Lecture on Ethics' which involves an appeal to three 'experiences' (Wittgenstein 1993, pp. 41–42):

- 'I wonder at the existence of the world'
- 'feeling absolutely safe'
- 'feeling guilty'

It is worth noting immediately that the first of these is but same as the 'astonishment that anything at all exists' mentioned in the December conversation with Schlick and Waismann. At all events, Wittgenstein makes two comments concerning these 'experiences' that are relevant here. First, although he calls the first in the above list 'my experience *par excellence*' and 'my first and foremost example', he also recognizes that others may 'recall the same or similar experiences so that we may have a common ground for our investigation' (Wittgenstein 1993, p. 41). In other words, he did not seek to undermine claims that such experiences exist (as some are tempted to think), but rather *presupposed their existence*.

This does not contradict the *Tractatus,* where he certainly does not deny the existence of an '*Unausprechliches*' (Wittgenstein 1961, 6.522). As a matter of fact, his *Geheime Tagebücher* show that he has gone through such experiences during the war (Wittgenstein 1991). I think all of this undermines the currently fashionable readings, pioneered by Cora Diamond and James Conant, and whatever goes under the now old name of 'New Wittgenstein' that fits with it,[26] because the upshot of that reading is that there is nothing—no such experiences—about which one could utter nonsense, because the concept of 'nonsense' deployed in the *Tractatus* is interpreted as a sort of total gibberish undistinguishable from a syntactically in-

[26] I am thus referring to interpretations of the *Tractatus* that rely in an essential manner on papers collected in Diamond (1991). The expression 'New Wittgenstein' comes from the title of Crary & Read (2000).

admissible combination of words such as ‘Caesar is and’ or, to use Diamond’s own example, ‘piggly wiggle tiggle’, for which, of course, one would not be taken to refer to anything at all.[27]

To this one may add that, although Wittgenstein claims, as we saw, that to try and talk about such ‘experiences’ is to attempt *per impossibile* to ‘run against the limits of language’, i.e. to reach beyond the bounds of sense, Wittgenstein remains respectful of that tendency:

> It is a document of a tendency in the human mind which I personally cannot help respecting deeply and I would not for my life ridicule it. (Wittgenstein 1993, pp. 41–42)

So, if there are any disagreements with Heidegger, it will not be about the tendency itself to speak where one should keep silent, but precisely because Wittgenstein thought one should learn to remain silent, while Heidegger writes, *inter alia,* the sentences of ‘What is Metaphysics?’, and thus produces the sort of ‘inarticulate sound’ with which one would like to begin in philosophy, as we shall in the last section of this chapter. This is a point worth emphasizing inasmuch that there is some common ground between the two here about the need to address these issues, only that one chose to argue for silence, while the other chose to write as if speaking is possible and needed.

Secondly, Wittgenstein points out these three ‘experiences’ can be couched in religious terms, i.e. (Wittgenstein 1993, p. 44):

- ‘God had created the world’
- ‘[feeling] safe in the hands of God’
- ‘God disapproves of [my] conduct’

But to say that such ‘experiences’ can be described in religious terms is also to imply that religious terminology is not necessary; one can have them without belief in God. (Of course, one may never have such ‘experiences’, but then one would risk lacking the empathy needed to understand what either Heidegger or Wittgenstein are talking about.)

Now, to call these ‘experiences’ is not wrong, still it is worth pointing out that these are experiences in which one feels an *emotion,* ‘wonder’, ‘safety’, and ‘guilt’; an emotion, the feeling of which is neither denied nor even demeaned by Wittgenstein, as we just saw. Furthermore, if we forget for a moment the third one, it is possible to argue that these ‘experiences’ involve what I have called earlier ‘cosmic emotions’; I need now to explain what I mean by this. As I said, the expression comes from Sidgwick and Clifford, who defined them as emotions ‘felt in regard to the universe or sum of things, viewed as a cosmos or order’ (Clifford 1886, p. 394). Clifford further distinguished between two sorts of cosmic emotions. Those of the

[27] That cosmic emotions have no linguistic ‘content’ does not mean that they do not exist, i.e. that nobody ever *really* feels them. This would be a plain *non sequitur*. And there is no way—unless one is blind to the textual evidence—one could read Wittgenstein as pretending to, but not really feeling these cosmic emotions. Therefore, unless our reading of the *Tractatus* makes room for them, it be, I think, an insult to Wittgenstein to claim that he was ‘chickening out’ because he felt cosmic emotions.

first sort, which he describes as 'awe, veneration, resignation, submission', are experienced when

> […] we try to put together the most general conceptions that we can form about the great aggregate of events that are always going on, to strike a balance among the feelings which these events produce in us, and to add to these the feeling of vastness associated with an attempt to represent the whole of existence. (Clifford 1886, p. 394)

And cosmic emotions of the second sort are experienced when

> […] we consider the totality of our own actions and the feelings that go with them or spring out of them, if we frame the highest possible generalisation to express the character of these which we call good, and if we contemplate this with the feeling of vastness which belongs to that which concerns all things men do. (Clifford 1886, p. 394)

These emotions of the second sort are of little interest for the purpose of this chapter, and I would like to retain instead, as the vantage point from which to provide a commentary of Wittgenstein's remarks on Heidegger, the first sort as defining 'cosmic emotions', i.e. emotions that are felt when one contemplates the world as a whole or, to use Wittgenstein's phrase, as a 'limited whole'. Clearly, the first two of the above list of emotions from the 'Lecture on Ethics' are 'cosmic emotions'. (Perhaps the third item on the list is of Clifford's second sort.)

Since Clifford's paper, the expression 'cosmic emotion' has been frequently used and discussed (for example, by William James 1902, p. 79, 1907, p. 276), but often with meanings attached to it that bring the notion closer to religious mystical experience as such, e.g. in R. M. Bucke's *Cosmic Consciousness,* and then by William James.[28] But one ought not to confuse the two. Mystical experience has been variously described as the 'disappearance of the ego', 'the void', 'absorption into God', etc., but no such thing is involved in cosmic emotions as defined here. Making this distinction allows us to steer clear of issues related to the meaning of 'mysticism' in

[28] In this book, Bucke describes 'cosmic consciousness' as 'a consciousness of the cosmos', i.e. of 'the life and order of the universe', but also in terms reminiscent of mystical experience, e.g. as when he speaks of an 'intellectual enlightenment which alone would place the individual on a new plane of existence' or of 'a sense of immortality, a consciousness of eternal life' (Bucke 1901, p. 2). Worse, Bucke sees this 'cosmic consciousness' as a new faculty, a 'third form' added to 'self-consciousness' and 'simple consciousness' (Bucke 1901, p. 2). Postulating a 'faculty' may not be a particularly clever philosophical move, it is also, more importantly, superfluous for our understanding of these emotions. One should note that Bucke (like Clifford) is discussed by James in *Varieties of Religious Experience* (James 1902, 398 f.), a book that Wittgenstein knew quite well. He commented on it already in 1912 in a letter to Russell: 'Whenever I have time I now read James's "Varieties of religious experience". This does me a lot of good. I do not mean to say that I will be a saint soon, but I am not sure that it does not improve me a little in a way in which I would like to improve very much: namely I think that it helps me to get rid of the Sorge (in the sense in which Goethe used the word in the second part of Faust).' (Wittgenstein 2008, p. 30). Wittgenstein's allusion is to Faust's struggle with (the spirit of) Sorge or Care in the fourth scene of Faust, Part II, Act V: too many scruples will stop you from acting; an idea not unrelated to Horace's atra Cura in Odes III.1.40. Wittgenstein's struggle with Care is thus similar to Faust's. 'Sorge' is also a well-known, key theme in Heidegger's *Being and Time*, Division I, Part VI, but one should not see a connection here, especially in light of the fact that Heidegger's notion is clearly distinct from Goethe's. On this last point, see Picardi (2001).

Wittgenstein's *Tractatus,* if one is to agree that what Wittgenstein refers to as '*das Mystische*', i.e. 'feeling the world as a limited whole' (Wittgenstein 1961, 6.45), is given with experiencing 'cosmic emotions' (on this issue, see McGuinness 1966). Recall that 6.44 equates it with the 'wonder at the existence of the world':

> 6.44—It is not how things are in the world that is mystical, but that it exists. (Wittgenstein 1961, 6.44)

Moreover, as understood here, cosmic emotions can be very well experienced by anyone without any regular practice of so-called spiritual exercises, and, although they are often described with help of a religious vocabulary—we just saw that this was Wittgenstein's point—they need *not* involve any religious belief at all.[29] At all events, all that is required in what follows is simply the minimal assumption that some of us do experience them.

Likewise for Heidegger, for whom, as we can see from the passage from *Being and Time* quoted above, '*Grundstimmungen*' such as '*Angst*' are 'cosmic emotions'. Indeed, 'anxiety' is not like 'fear' directed at a particular object but, in first approximation to one's experience as a whole.[30] As a matter of fact, one of the central claims of 'What is Metaphysics?' is that 'Anxiety reveals the nothing'.[31] One should note that Heidegger's argument in support of this claim is rather poor. According to him,

> When Angst has quieted down, in our everyday way of talking we are accustomed to say 'It was really nothing'.[32]

This is a fallacious piece of reasoning based on equivocation on 'nothing' in the expression 'it was nothing'; nobody would claim that '*worum wir uns ängsteten war eigentlich nichts*' entails that '*das Nichts war da*'. The point is also obvious in French, where one would say '*ce n'est vraiment rien*'; there is no locution using the word '*néant*'. Such considerations show that ordinary language does not support Heidegger's claim that anxiety reveals the *Nichts*.[33]

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[29] On this point, see Hulin (1993), who speaks of 'mystique sauvage'. One should note a renewal of interest in the notion in French philosophy, in the writings of Pierre Hadot. See, e.g. Hadot (2001), where the theme is recurrent. It is not a coincidence that Hadot was the first in France ever to write on Wittgenstein, with papers in 1959 on mysticism in the Tractatus logico-philosophicus, now collected in Hadot (2004). Distinguishing cosmic emotions from mystical experience as such will help us seeing how barren such readings are.

[30] We can see from this passage that Heidegger distinguishes 'anxiety' (Angst) from 'fear' (Furcht), thus the former as 'Grundstimmung' from the former as 'Gefühl'. He thus distinguishes between 'mood' and 'emotion' and one has to be careful with use of the expression 'cosmic emotion' to refer to the former.

[31] 'Die Angst offenbart das Nichts' (Heidegger 1976, pp. 112/101).

[32] 'Wenn die Angst sich gelegt hat, dann plegt die alltägliche Rede zu sagen: »es war eigentlich nichts«' (Heidegger 1977, pp. 187/175).

[33] The point is worth emphasizing since one hears often Heidegger being praised for remaining close to ordinary usage while introducing a galore of new concepts. (And it is no use to point out either that Heidegger would only recognize Ancient Greek and German as philosophical/metaphysical languages.) Carnap had already noticed that in 'Das Nichts nichtet' the verb 'nichten' or 'to nothing' is a deviation from ordinary language (Carnap 1931b, pp. 230/71).

More importantly, one must realize that, for Heidegger, cosmic emotions are *metaphysical cognitions*. This can already be seen from the claim that 'anxiety *reveals* the nothing' or from passages such as this:

> Such being attuned [throughout emotions such as anxiety, boredom and joy just discussed by Heidegger], in which we 'are' one way or another and which determines us through and through, lets us find ourselves among beings as a whole. The founding mode of attunement not only reveals beings as a whole in various ways, but this revealing—far from being merely incidental—is also the occurrence of our Da-sein.[34]

As the last sentence of this quotation makes amply clear, for Heidegger, these emotions play a key *cognitive* role; here, the '*Befindlichkeit der Stimmung*' *reveals* '*Seiende*' (beings) as a whole. (Again we see here the 'cosmic' nature of such emotions.)[35] 'Anxiety' is said also to 'reveal' or 'disclose' the 'openness of beings':

> In the clear night of the nothing of anxiety the original openness of beings as such arises: that they are being—and not nothing.[36]
> But this 'and not nothing' we add in our talk is not some kind of appended clarification. Rather, it makes possible in advance the revelation of beings in general.[37]

In other perhaps less obscure words, 'beings' reveal themselves as 'beings' over the background of 'nothing' when one feels 'anxiety'.

It is also crucial that one understand that such claims about 'anxiety', e.g. that it 'reveals the nothing' are *not incidental,* because Heidegger wanted to show in his inaugural lecture, which is after all an attempt at answering the question raised in its title, the relevance of 'anxiety' for the answer to what is, according to him, the most fundamental question of all metaphysics[38]:

> Why are there beings at all, and why not rather nothing?[39]

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[34] 'Solches Gestimmtsein, darin einem so und so *"*ist*"*, last uns—von ihm durchstimmt—immitten des Seienden im Ganzen befinden. Die Befindlichkeit der Stimmung enthüllt nicht nur je nach ihrer Weise das Seiende im Ganzen, sondern dieses Enthüllen is zugleich—weit entfern von einem bloßen Vorkommtnis—das Grundgeschehen unseres Da-seins' (Heidegger 1976, pp. 110/100).

[35] This key role of moods and affects has been studied by a student of Heidegger, Otto-Friedrich Bollnow in Bollnow (1995). See also the less orthodox Smith (1986).

[36] 'In der Hellen Nacht des Nichts der Angst ersteht erst die ürsprunliche Offenheit des Seienden als eine solchen : daß es Seiendes ist—und nicht Nichts' (Heidegger 1976, pp. 114/103). It is interesting to note here Heidegger's allusion to mystical experience in the way he expresses himself: 'In the clear night of the nothing of anxiety'. This may be seen as a failed attempt at sounding deep and poetic, but it also shows that Heidegger wanted to emphasize the links with the very mystical experience that I argued would only confuse the underlying issues.

[37] 'Diese von uns in der Rede dazugesagte »und nicht Nichts« is aber keine nachgetragene Erklärung, sondern die vorgängige Ermöglichung der Offenbarkeit von Seiendem überhaupt' (Heidegger 1976, pp. 114 /103).

[38] This is the claim of the opening sentences of *Einführung in die Metaphysik* (Heidegger 1983).

[39] 'Warum ist überhaupt Seiendes und nicht vielmehr Nichts?' (Heidegger 1976, pp. 122/110).

Carnap is perhaps wrong, therefore, to dismiss the role of emotions in Heidegger's text.[40] On the other hand, the above is just the *interrogative form* of the 'wonder at the existence of the world' or the 'astonishment that anything at all exists' discussed by Wittgenstein in the *Tractatus,* the 'Lecture on Ethics' and the December conversation with Schlick and Waismann. Recall that in the latter he reportedly said:

> Think for example of the astonishment that anything at all exists. This astonishment cannot be expressed in the form of a question, and there is no answer whatsoever.

We can now see *both* that Wittgenstein was thus referring here to 'What is Metaphysics?'—since the question does not occur in *Being and Time*—at least not in its § 40—and that he actually disagreed with Heidegger: where the latter asks the question and tries to give an answer involving 'anxiety', Wittgenstein claims that one cannot ask the question to begin with. His reasons for this are laid out in 6.5–6.521 of the *Tractatus* and in the 'Lecture on Ethics'; they have to do with the fact that the answer to a question such as 'Why are there beings at all, and why not rather nothing?' has to do with *dissolving it,* i.e. with showing that one cannot answer it, and therefore that one cannot ask it:

> 6.5—When the answer cannot be put into words, neither can the question be put into words. […] If a question can be framed at all, it is also *possible* to answer it. (Wittgenstein 1961, 6.5)

This was his solution to the 'problem of life'. Perhaps one could sum up the differences between Heidegger and Wittgenstein saying that for the latter it is not so much that cosmic emotions are not metaphysical cognitions but that they cannot be made into metaphysical cognitions, because their content cannot be linguistically articulated, it is '*Unausprechlich*', while the former thinks that they ground his metaphysical assertions (and the latter presumably involve the introduction of new vocabulary).

I hope that the foregoing gives sufficient reasons for the belief that Wittgenstein was merely commenting on Heidegger's 'What is Metaphysics?' in his conversation with Schlick and Waismann. To this, I may add one small point. One could counter that Wittgenstein also pointed out in that conversation that the 'running up against the limits of language is *ethics*', while Heidegger is not known, on the other hand, for any contribution to ethics; he has been, one might claim, unjustly bunched up all along with those who 'tried to write or talk Ethics or Religion' and who thus ran 'against the boundaries of language' (Wittgenstein 1993, p. 44). To this one could reply, however, that Heidegger does make a claim (again, one which is not incidental) that involves ethical concepts:

[40] (Carnap 1931b, pp. 231/71). The whole passage is worth rereading, however, because Carnap is nevertheless on strong grounds, as he points out that Heidegger's use of 'nicht' in conjunction with 'und sonst nicht' in some of the passages he quotes show that he is presupposing logical negation after all. But this is to miss Heidegger's point, in favour of a cogent criticism of his own manner of expression.

> Without the original revelation of the nothing, no selfhood and no freedom.[41]

And for that reason Wittgenstein's remark is not entirely out of place.

I would like to turn now to the section 'On the Character of Disquiet' of the *Diktat für Schlick* and look at the evidence therein. For this, I need merely to recall one last passage from Heidegger's 'What is Metaphysics?', where he insisted on the fact that the '*Nichts*' is not just a foil for the '*Seienden*', that it is *not passive*. This is precisely the passage where Heidegger claims that '*Das Nichts selbst nichtet*':

> This wholly repelling gesture towards beings that are in retreat as a whole, which is the action of the nothing that oppresses Dasein in anxiety, is the essence of the nothing: nihilation. It is neither an annihilation of beings nor does it spring from a negation. Nihilation will not submit to calculations in terms of annihilation and negation. The nothing itself nihilates.[42]

Given the 'revelatory' or 'disclosive' role of 'anxiety' presented above, Heidegger concludes in typically assertoric fashion:

> In the Being of beings the nihilation of the nothing occurs.[43]

Now, the section 'On the Character of Disquiet' opens with clear references to 'What is Metaphysics?':

> If we want to deal with a proposition such as 'The nothing nots' or with the question 'Which is prior, the nothing or negation', then to do it justice we ask ourselves: What did the author have in mind with this proposition? Where did he get this proposition from?' (Wittgenstein 2003, p. 69)

(Again, neither the sentence nor the question occurs in *Being and Time*.) What is particularly interesting is that Wittgenstein proposed his own simile to express the apparently active character of the '*Nichts*' in the earlier quotations (again a silent indication that the text referred to is 'What is Metaphysics?'):

> Anyone who speaks of the opposition of being and nothing, and of the nothing as something primary in contrast to negation, has in mind, I think, a picture of an island of being washed by an infinite ocean of the nothing. Whatever we throw into this ocean will be dissolved in its water and annihilated. But the ocean itself is endlessly restless like the waves on the sea. It exists, it is, and we say: 'It noths'. In this sense even rest would be described as an activity. (Wittgenstein 2003, p. 71)

This provides more support to the claim that Wittgenstein did indeed read Heidegger's 'What is Metaphysics?' and that probably this is the only text by Heidegger he ever read. I would like now to go one step further and show that this section of the *Diktat* contains good reasons to believe that Wittgenstein saw himself to be completely at odds with Heidegger. Of particular interest is the fact that he

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[41] 'Ohne ursprüngliche Offenbarkeit des Nichts kein Selbstsein und keine Freiheit' (Heidegger 1976, pp. 115/103).

[42] 'Diese im Ganzen abweisende Verweisung auf das entgleitende Seiende im Ganzen, als welche das Nichts in der Angst das Dasein umdrängt, is das Wesen des Nichts: die Nichtung. Sie ist weder eine Vernichtung des Seienden, noch entspringt sie einer Verneinung aufrechnen. Das Nichts selbst nichtet' (Heidegger 1976, pp. 114/103).

[43] 'Im Sein des Seienden geschieht das Nichten des Nichts' (Heidegger 1976, pp. 115/104).

goes on providing two critiques.[44] First, although not named, Heidegger is here singled out as the perfect example of the metaphysician who is unable to renounce speaking about cosmic emotions, while he should have kept quiet. (He is of course not the only one for Wittgenstein, McTaggart and Kierkegaard come to mind.)[45] The section ends up with the claim, to which I shall come back, that phrases such as 'The nothing noths' are but a substitute for the 'inarticulate sounds' with which one would like to begin philosophy (Wittgenstein 2003, p. 75).[46] Inarticulate sounds are precisely what would result if one were to utter propositions with signs lacking meaning, as in 6.53:

> 6.53—[…] whenever someone else wanted to say something metaphysical, to demonstrate to him that he failed to give a meaning to certain signs in his proposition. (Wittgenstein 1961, 6.54)

They result from yielding to the temptation to speak *whereof one cannot speak*. For that reason, one's soul needs to be cured,[47] i.e. one needs a *therapy* using a method that 'resembles psychoanalysis in some sense':

> […] a simile at work in the unconscious is made harmless by being articulated. (Wittgenstein 2003, p. 69)

But the actual examples of therapy he gives refer directly to his *Tractatus* on predication and on identity, i.e. one must point out breaches of the 'logical syntax' of language:

> […] if we free him from his confusion then we have accomplished what we wanted to do for him. It may seem strange to us what trivial means, as it were, serve to free us from profound philosophical disquiets. It is strange that nothing more is needed in a particular case, e.g. than replacing one word by two different ones, the word 'is' by the two signs '=' and 'ε', in order to get rid of the tormenting question 'To what extent is a rose identical with red?'. But all we learn from this is how profound a confusion is when it is embodied in our language. It is strange that we can free someone from the profound and, in a certain

[44] There is also an interesting discussion of the metaphor of foundations in terms of…problems of digestion, that I cannot discuss here, at Wittgenstein (2003, p. 75).

[45] See, e.g. the remark on McTaggart in Rhees (1984, p. 82). Kierkegaard holds a special place, according to Wittgenstein, as one of the most important metaphysicians, precisely because he saw this 'running up against the limits of language' and 'referred to it in a fairly similar way (as running up against the paradox)' (Wittgenstein 1979, p. 68). The reference here is to the 'Absolute paradox' in *Philosophical Fragments* (Kierkegaard 1985, Chap. 3).

[46] There is a better known reference to these 'inarticulate sounds' in *Philosophical Remarks* (Wittgenstein 1965, § 68). It is hardly a coincidence, therefore, that this passage occurs for the first time at the very end of MS 106, written at the end of 1929, i.e. at the time of the 'Lecture on Ethics' in Cambridge and the meeting with Schlick and Waismann in Vienna. One should note, however, that in a remark from MS 113 that found its way into the Big Typescript (Wittgenstein 2005, p. 349), Wittgenstein gives as another instance of 'inarticulate sound' the sentence 'Ich habe um mein Wissen wissend, bewusst etwas' taken from Hans Driesch's *Ordnungslehre* (Driesch 1912, p. 19). This should not detain us, but it is worth noting that Driesch's book might be one of the sources of Wittgenstein's remarks on solipsism in his Tractatus.

[47] Wittgenstein does speak at length of the wretchedness of his soul and the need for a cure, in passages hardly ever discussed. Thanks to Gerhard Schmezer for pointing them to me.

> sense, mysterious question of what the proposition 'A=A' means by introducing a notation in which this proposition cannot be formulated. (Wittgenstein 2003, p. 71)

Given his diatribe on logic, quoted above, I sincerely doubt that Heidegger would have been cured by these 'trivial means'! More interesting, these look, as a matter of fact, very much reminiscent of Carnap in his paper on 'The Elimination of Metaphysics Through Logical Analysis of Language'—or reminiscent of the switch from the 'material' to the 'formal mode of speech' in other writings—[48] and will probably reenforce the idea that Waismann's tampering with the material bent Wittgenstein's intended meaning, so that his remarks would come out much more in line with the views of the Vienna Circle than they really were.

This brings us back to the worry voiced at the beginning of the paper, which we are in a position to address now. The reference to psychoanalysis and the image of 'an island of being washed by an infinite ocean of the nothing' in the passages just quoted cannot be, I think, attributed to Waismann. Since the image is in direct reference to Heidegger's 'What is Metaphysics?', this settles negatively the claim that references to Heidegger were introduced by Waismann. (The same goes for the reference to Adolf Loos in what follows.) This much shows that the content of the passage can reasonably be taken as reflecting Wittgenstein's standpoint, and not as distorted by Waismann's tampering.

Wittgenstein's commentators have been so busy for decades pitting him against Carnap, that we have lost any sense that these two may have had anything in common, e.g. a rejection of 'metaphysics' of the sort represented by Heidegger. As a matter of fact, most 'Wittgensteinians' would be rather inclined today to think that Wittgenstein had in mind Carnap when thinking about the need for some philosophers to undergo a therapy. This deeply ingrained prejudice is not borne by Wittgenstein's text. It is Heidegger, not Carnap, who is singled out for therapy here. It is Heidegger who is the enemy, so to speak, here, not Carnap or the 'classical project of analysis' as a presumed common enemy to Wittgenstein and Heidegger.

Still there are noticeable differences between Carnap's and Wittgenstein's critique worth underlining, not least of them is the analogy with psychoanalysis. This early reference opens a new perspective on Wittgenstein's oversold remarks from *Philosophical Investigations,* for example:

> 255. The philosopher treats a question; like an illness. (Wittgenstein 2009, § 255, see also §§ 133, p. 254)

First, this confirms what everyone ought to have known since the publication of fragments of the *Big Typescript* (assembled in 1933 from earlier manuscripts; Wittgenstein 1993, p. 165; Wittgenstein 2005, p. 303), that this is *not* an idea from the *later* Wittgenstein. Second, it shows that Wittgenstein was aware of the limits of the analogy and that he thought that tools very much like those set forth in his *Tractatus* and by Carnap in 'The Elimination of Metaphysics Through Logical Analysis of Language', such as the distinction between two meanings of the word 'is' as '=' or 'ε', can be used for a psychoanalysis. The analogy, therefore, does not imply a

[48] E.g. Carnap (1931a) discussed below.

radical change of viewpoint, it is merely that Wittgenstein proceeds otherwise in *Philosophical Investigations,* in ways that do not necessarily contradict his earlier 'elucidations'.

Before moving to the second critique, it is worth digressing for a moment and see where Wittgenstein's critique leaves us with respect to our own understanding of his *Tractatus*. Current readings of Wittgenstein influenced by Diamond and Conant have put the emphasis on the fact that Wittgenstein attacks at 6.54 his own remarks, inside the 'frame' of the book:

> 6.54—My propositions serve as elucidations in the following way: anyone who understands me eventually recognizes them as nonsensical [*unsinnig*], when he has used them—as steps—to climb up beyond them […] (Wittgenstein 1961, 6.54)

The agenda behind this emphasis is (in part) to aim at 'ontological' interpretations of the *Tractatus,*[49] of the sort Kevin Mulligan, among others, has been working out, in his case while carefully placing Wittgenstein's book back within its own context, i.e. Austrian philosophy. This conclusion is paradoxical inasmuch as it relies on a conception of 'nonsense' that presupposes in turn the very definition of what it is for a proposition to be endowed with sense which he develops 'within the frame', so to speak, i.e. with propositions that are condemned here as '*unsinnig*'. I do not wish to try and dispel the air of circularity; I am not sure that this can be satisfactorily done. But I would like to point out that there is a sense in which there is an important difference here between the propositions of the *Tractatus* and the propositions of 'What is Metaphysics?' The former are needed for an argument in support of the final proposition of the book, 'What we cannot speak about we must consign to silence' (Wittgenstein 1961, p. 7), while the latter are propositions uttered precisely at a point where one should have kept silent. (The 'therapy', if there is one, would be here to understand the *Tractatus,* to throw the ladder away, so to remain silent.) Since it is impossible to argue for silence without the former, both sets of propositions cannot be on a par.

The idea of a proposition serving as an 'elucidation' in 6.54 refers back to a paragraph inside the 'frame', at 4.112—a set of propositions, therefore, that cannot be 'austere' nonsense themselves for fear that 6.54 itself could not even be understood:

> 4.112—Philosophy aims at the clarification of thoughts.
> Philosophy is not a body of doctrine but an activity.
> A philosophical work consists essentially of elucidations.
> Philosophy does not result in 'philosophical propositions', but rather in the clarification of propositions. (Wittgenstein 1961, 4.112)

I should merely remind the reader here that in 1931 Carnap also published a paper entitled '*Die physicalische Sprache als Universalsprache der Wissenschaft*' (Carnap 1931a), translated later on in English as 'The Unity of Science' (Carnap 1995), an offprint of which he sent to Wittgenstein, who reacted angrily, accusing Carnap, in letters to Schlick, of stealing his ideas. One should note that Carnap was indeed

[49] The heart of this agenda is an attack on the saying/showing distinction, as can be seen from Diamond (1991, pp. 181–182).

very close to Wittgenstein, for example, he claimed (albeit only in the preface to the English translation in 1934) that he does not put forward 'philosophical theses'; this being in line with 4.112 (Carnap 1995, p. 21). The gist of Wittgenstein's angry reaction is that he did not think, contrary to what one might have expected, that Carnap distorted his ideas, but that Carnap published them without proper acknowledgement so that he would end up looking, when finally publishing his own, as a plagiarist. I am not going to discuss these letters here,[50] but I should point out that the last item in the list of stolen ideas in Wittgenstein's letter to Schlick dated August 21, 1932, is the idea of the elimination of metaphysics through the adoption of the 'formal mode of speech' is exactly equivalent to the critique of metaphysics in the last paragraphs of the *Tractatus* (6–53-7). As he writes to Schlick:

> You know yourself very well that Carnap is not taking a single step beyond me when he approves of the formal and rejects the 'material mode of speech'. It is inconceivable to me that Carnap should have misunderstood the last propositions of the *Tractatus* and hence the basic ideas of the entire work—so thoroughly. (Quoted in Hintikka 1995, p. 37)

What more can we ask for than Wittgenstein's own opinion on these matters? The distinction between propositions inside the 'frame' of the *Tractatus* and propositions in 'What is Metaphysics?' which is here too in evidence is, I fear, annulled with the current fashionable reading of the *Tractatus*. The latter is thus incorrect, on an *essential* point. Of course, I cannot pretend to provide a full and coherent interpretation of the *Tractatus,* even if a fully coherent interpretation were possible, but it seems to me that any reading that confuses both cannot be right.

Wittgenstein's second critique is in deeply personal terms and is even more surprising; it must be granted that he probably thought it even more damning. The passage is worth quoting in full:

> And a proposition such as 'The nothing noths' is in a certain sense a substitute for this sort of inarticulate sound. […] The need to preface our enquiries with such propositions or slogans is in a sense really a requirement of style. In certain periods houses and chests of drawers are bounded with a cornice. Calling attention to boundedness is something desirable. We finish off posts of all kinds with knobs even where this is not demanded by functional considerations. A post must not simply stop. At other times there is a need not to emphasize, but rather artificially to conceal boundedness. An object must fade into its surroundings. In this style the edge of a tablecloth was given lace borders, which were originally nothing more than scallops cut into the cloth, for we did not want it to be sharply bounded. But at other times we give a border its own colour in order to call attention to it. And that is just how it is with this argument: it is a desideratum, e.g., to trace back to a creator the coming into being of the universe even though this in a certain sense explains nothing and merely calls attention to the beginning. (This last reflection is of the type of those made by the architect Loos and is certainly influenced by him.) (Wittgenstein 2003, pp. 75–77)

One can link this comment with Wittgenstein's own attitude towards '*Abschluss*' in the architecture of the house he designed for his sisters on the Kundmanngasse in Vienna, as well as with the idea that such a stylistic faux pas would count for Karl Kraus as the mark of moral corruption (see the *locus classicus* Janik and Toulmin

[50] See Hintikka (1995) or my own Marion (2002) and, for an overview of the debates concerning the content of this letter, Stern (2007).

1973, Chap. 3). To put it in a nutshell his intention to avoid ornamentation—clearly in evidence in the house he designed—had an ethical dimension of this sort.[51] Likewise, there is an ethical dimension in learning to remain silent where Heidegger utters '*Das Nichts nichtet*', and so forth. So, one can indeed only think of Wittgenstein as condemning here Heidegger's metaphysical claims in what he would have considered his strongest possible terms.

Again, my point is not to take such criticisms for granted and possibly to engage into some Heidegger bashing, but to understand them correctly in order better to understand Wittgenstein's philosophy (see, e.g. my comments on the first objection). Yet, the above underscore the fact that—for better or for worse—Wittgenstein could never have seen himself as part of the same community as Heidegger, a truth that needs to be reiterated after decades of attempts to artificially bring them together. I understand that I have not begun to address any of the substantial parallels that have been drawn in the secondary literature between Wittgenstein and Heidegger, and that this conclusion will appear deeply unsatisfactory to some. Moreover, I have shown here that they appear at least to have opposite views on the same issue, so that they are in some sense indeed engaged in the same task. To this one could reply by citing a passage from Shakespeare's *King Lear* (Act 1, scene IV), that Wittgenstein once considered for the motto to his *Philosophical Investigations* (albeit, of course, for other reasons):

> I'll teach you differences.

This issue is central and their divergence of views on this issue *is* at the very heart of the analytical-continental divide. Any attempt at overcoming this divide by ignoring this point, no matter how welcomed, would be historically inaccurate to begin with, in ways that might quite possibly vitiate that very attempt.

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[51] I have discussed this point and its relation to the architecture of Wittgenstein's house in Marion (2007).

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Chapter 30
Le dogme de la vérité selon Parménide

Jean-Maurice Monnoyer

Abstract Peut-on continuer d'opposer l'approche phénoménologique et métaphysique? Parmenide, fondateur de la métaphysique, s'adresse dans son texte à l'évidence de la *thisness* (à la caractéristique du *ceci*): le *to gar auto*. Son emploi double de la copule *est,* emploi existentiel et prédicationnel, a provoqué une discussion légendaire sur son actualisme et son nécessitarisme supposés, qui ont été forgés en dépit de la compréhension de ses énoncés. L'article se propose de comparer les lectures de C.Kahn, D. O'Brien, J. Barnes et J. Bollack, pour fournir une lecture non archéologique de cette conception trahie depuis *Le Sophiste* de Platon au moins, mais qui reste le modèle de ce que devrait être une métaphysique expérimentale.

Keywords Assertion · Vérité nécessaire · Vérité doxastique · Conception aléthique · Possibilité

Parménide—dont on pense que la carrière a connu son *acmé* au cours de la 69eme Olympiade, entre 504 et 501 av J-C—propose dans les fragments qui nous sont restés de son *Poème*, une théorie de la vérité et une théorie du monde, articulant le *Cosmos* et le *Logos* dans une dimension inédite qui n'est nullement disciplinaire, bien que ces deux théories conjointes aient inclus le discours (ou la raison discursive) dans l'énonciation de leur « sujet ». Le Poème ne comporte qu'un peu plus de 200 vers, à peu près, dans l'édition Diels-Kranz (1879–1951): on sait qu'il est instruit par une *division des deux voies praticables dans la recherche de la vérité par les Mortels*. Un troisième chemin concerne ce que les Mortels peuvent se représenter croire ou savoir (que la terre est sphérique par exemple, ou que l'étoile du soir et l'étoile du matin sont la même planète: *Venus*; Parménide étant le découvreur présumé de ces deux faits). Ces *dokounta* ne sont évidemment pas de simples « opinions » (en principe « fausses »), mais elles échappent aux formulations centrales qui regardent l'énonciation du vrai, qui est dit et qui se dit être *métaphysiquement nécessaire*. La réalité est que ces observations astronomiques auraient probablement été « différentes » si le monde n'était pas celui que les Mortels observent, ou s'il avait été constitué autrement qu'il ne l'est.

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Invoquant le commandement de la *Diké* (la déesse de la justice), Parménide opère d'emblée une série de démarcations dans le discours: le lieu n'est pas ici de commenter ce qui relève chez lui des attributions idiomatiques et homériques, de son emphase ou de la révélation du Vrai, voire de certaines prophéties chamaniques et catastrophistes dirigés contre le monde ionien. Car il n'y pas d'Au-delà pour Parménide. Si le texte reste très difficile d'accès, il suffit de noter d'un côté, ce que nous enseigne la déesse, dont le contenu explicite proféré sert de truchement anti-naturaliste: il y a au principal le « chemin » des affirmations soutenables qui sont structurées par l'efficacité du discours aléthique: *ce qui est dit vrai et véridiquement assertable*; de l'autre, il y a le chemin des apparences, du changement, des attributions contradictoires. Rien ne se tient à la charnière de ces deux voies. La deuxième partie du Poème, consacrée au Monde—et à ces *dokounta* que nous formons à son endroit—demeure d'ailleurs beaucoup plus problématique, parce qu'elle traite de l'arrangement des sphères et ressemble à une « théorie du ciel » que va critiquer Aristote au premier livre de sa *Métaphysique*. Il semble aussi que Platon ait suspecté la fascination de l'ordre pythagoricien qui reste présente en filigrane chez Parménide, quoique l' « Un » ne soit encore chez Parménide que *l'une* des attributions de l'étant. On sait que Platon aura ensuite systématisé cette unité cosmologique dans le sens d'une hiérarchie intellective, sans décider vraiment en quoi cette universalité de l'Être présupposait aussi la subsistance du Non-être pour être elle-même ''pensable''—comme il l'écrit dans le *Sophiste* (237a, 244e, 258d)[1]. Bref, à partir de ces deux exemples très vénérables, et pour ne s'en tenir présentement qu'à une investigation minimale, il y a bien eu un questionnement suspectant le fonds de « ce qui est donné » parce que nous le pensons disponible, ou tel que nous pourrions le faire apparaître et le faire disparaître—disons de ce qui serait « présent », au titre de la perception seule et dans la phénoménologie de son apparence sensible. Beaucoup plus tard, à l'époque médiévale, on parlera ensuite d'une *double séparation de l'étant et de sa matière, puis de l'étant et de son essence*, qui sont entre elles irréductibles. Le fait est que « matière » et « essence » deviennent des termes *techniques* par excellence; le mot « étant » (l'*ens*) ne sera plus du tout indéterminé dès cette époque. Plus récemment cette fois, renversant le processus séparateur platonicien, Husserl soutiendra quant à lui que le *catégorial* est précisément « donné » (le nom de « phénoménologie » sera dès alors associé à la caractérisation de cette attitude). Il faut oublier ici le jargon sur la donation caractéristique de la scène philosophique francophone aujourd'hui encore. Les divisions dans l'être, la qualification des essences, ne sont bien telles, d'après Husserl, que parce qu'avec ces dernières un « sens » *en acte* nous est fourni dans l'intuition (cf. la VIe des *Recherches Logiques*, 1901), à cette réserve près, et notable, que nous ne pouvons pas le viser en dehors de ce que les sont les « choses mêmes » (ch. VII, § 58). En résumé, pour certains—ceux que j'appellerai *les plus habiles* pour reprendre un

[1] On peut noter ici que Platon considère la forme sphérique de l'Être comme une géométrisation, et qu'il insiste sur la contradiction entre l'affirmation exclusive de l'être et son dégagement du non-être. Il se concentre sur le concept de l'unité qu'il oppose à l'Idée du Bien, telle qu'il la conçoit, l'Un étant au-dessus du monde des Idées (Cf. Frère 1991).

terme grec—la dimension phénoménologique et l'exigence métaphysique paraissent définitivement inconciliables. Les œuvres de Brentano et de Meinong se tiennent pourtant sur cette ligne de fracture qui consiste à demander s'il faut récuser le processus d'abstraction dans sa présentation phénoménologique, chez eux à la fois anti-critique et anti-dogmatique. Peut-on soutenir, pour le dire vite, qu'il y ait une légitimité à défendre une *daseinsfreie Metaphysik*?

Il est vrai qu'on peut discuter de l'intérêt de revenir à cette assertabilité réclamée par Parménide, de surcroît dans un poème qui aurait donné lieu à tant de disputes inutiles. Oui, sauf qu'il est toujours périlleux de prétendre « dépasser » un jargon pour ne pas retomber dans un bavardage qui aboutirait finalement à lui en substituer un autre. C'est bien l'une des choses que nous a apprise Kevin Mulligan. La langue des philosophes est structurée de manière à ne pas permettre qu'on traite de la question de la vérité comme d'une question ''externe'', remarquait déjà Carnap. Un étant (*quelconque*) est sans doute peu aisé à appréhender dans sa généralité la plus radicale: ce n'est pas plus un quelque chose qui est perçu (un particulier), duquel on ne pourrait reconnaître aucune propriété hors d'une articulation phrastique, que quelque chose qui est jugé parce que nous l'avons perçu[2]. Ce n'est même pas encore un « objet », ou ce qu'il sera convenu d'appeler ensuite en l'individuant un *ens inquantum ens*, pour l'opposer aux ''entités de raison''. De là vient certes la grande importance du *Reales* de Brentano puisque le *corrélatif* est appauvri au profit du *relatif* qui absorbe toute réalité psychique et matérielle. Cette émendation restrictive étant faite, rien n'oblige, pour échapper à la difficulté qu'enferme la *nominalisation de l'étant*, de se réfugier dans la niche verbale du locuteur ou du sujet parlant, en soutenant par exemple, que cet « être-là » (*Dasein*) comme on dira au XX^{e} siècle, c'est-à-dire l'*étant* humain, l'*existant* dans son *être-au-monde*—subjectivant à part soi ce même point de vue sur le monde—« n'est pas » un existant à part entière. Cette antienne existentielle qui a fait florès chez Heidegger, puis chez Sartre repose sur un constat « anthropologique », tandis que la position parménidéenne est plus dégagée, plus austère et plus altière à la fois; elle n'est pas engoncée dans le ressenti oppressant qui est aujourd'hui devenu le lot commun de nos rapports humains.

Il y a donc un intérêt spécifique de s'intéresser à Parménide, malgré de coupables captations douteuses. L'idée d'être est la plus commune de toutes, la plus accessible des notions qui nous sont accessibles. Parmenide est en réalité celui qui donne au mot "est" sa forme d'existence la moins compromettante, la plus licite, et à dessein justement non-univoque. Si je me contente d'assimiler « être » et « exister », il semblerait que je ne fasse que « poser » mon sujet (Kant dira ainsi, en toute rigueur, que « l'existence est la position absolue d'une chose »), mais il n'est pas plus naturel, ni même normal, de poser l'existence de mon sujet que d'affirmer que « Dieu est » en ignorant l'*irreceptum* de la cognoscibilité divine pour un sujet quel qu'il soit.

Pour présenter les choses—encore une fois, en simplifiant beaucoup, et je m'en excuse auprès du lecteur—le *dictum* de Parménide, comme il est coutumier de le présenter, consiste au principal dans l'énonciation d'après laquelle on ne peut

[2] Je renvoie ici à Moro (2010), pour ce qui relève de l'aspect purement linguistique de cette question.

nullement substantiver ce qui « n'est pas ». On ne peut pas dire que « ceci » *n'est pas*, ni qu'il y ait quelque chose à laquelle on pense, *sur lequel la pensée porte*, et qui ne serait pas, dès lors que nous la visons. Reste à savoir ce que vise à son tour le « ceci » proprement dit: *le to gar auto*. En principe rien de particulier, ou en l'occurrence, tout abstraitement, il est ce que toute chose *est*, sans se dissoudre dans le devenir sensible où *ceci* se change en « cela ». La référence insistante faite au *ceci* (par ce seul mot souvent escamoté dans les traductions jugées élégantes) n'offre en tant que telle aucune contribution à la connaissance des conditions de vérité de l'énoncé des fragments 3 et 6 par exemple. Parménide est, en effet, le premier philosophe qui a entendu utiliser la copule « est » indifféremment, soit indépendamment de la prédication (dont il se sert pourtant), et en considérant que la copule se confond avec l'indication de l'existence. Cette dernière phrase étant elle-même assez équivoque par l'usage de "se confond". A partir de la forme à la troisième personne du présent de l'indicatif: le « est » (*estin*), Parménide soustrait une forme nominale du verbe être et infère une substantivation participiale (*to eon*, et *einai*). Il aurait donc « inventé » la métaphysique comme le soutient J. Barnes en en faisant la première postulation *a priori* de ce qu'il y a à connaître. En affirmant que quelque chose « est », l'énonciation de ce qui « est » écarte toute éventualité que cette même chose soit un non-étant (quel qu'il soit). Les historiens affirment que cette postulation se ferait à l'encontre de la dimension matérialiste du mobilisme universel chez Héraclite qui le précéda (Barnes 1997, p. 41). Héraclite pouvait dire: *pantai khôrei kai ouden menei* (« tout passe, tout change de place et rien ne demeure »), autrement dit: les choses froides se réchauffent, le chaud se refroidit, le sec se mouille, etc. La force du devenir impliquait une théorie de la perception que les Eléates (Zenon et Parménide) ont trouvé franchement inconsistante, parce que fondée sur le non-être, séparant la pensée d'avec son objet, et donc foncièrement élusive. Parménide inverse cette thèse, dès le fragment 3, qui énonce: *to gar auto noein estin te kai einai*, littéralement: « car le ceci, ceci même, est à la fois penser et être », comme le traduit strictement Jean Bollack[3]. On traduit généralement ce fragment par une affirmation d'identité moins rustique: « c'est en effet une seule et même chose que l'on pense et qui est » (Denis O'Brien). Il y a ici une affirmation d'identité assez formidable pour être remarquée, puisque le verbe « être » (à l'infinitif) joue le rôle d'un prédicat en grec; « ceci qui est » joue le rôle d'un sujet par défaut (*to ... estin*), ou d'un sujet inexplicite, tandis que pour la plupart des traducteurs le *même* du *to gar auto* devient le sujet (*denn dasselbe ist Denken und Sein*, « penser et être sont la même chose » : on renverse la proposition). Il y a donc ici une difficulté qu'on ne doit pas esquiver. Les verbes sont devenus des noms: la *verbalité de l'infinitif est escamotée*. Il y une dualité des verbes, et l'ancien grec la récuse, qui désigne par un déictique ce sur quoi porte le verbe. Le pseudo énoncé d'identité (*c'est la même chose que penser et être*, en paraphrasant) ne constitue pas un principe d'identité bien formé: c'est une stipulation d'un genre particulier. On ne dit pas A = A, ni non plus—pour renforcer la juridiction de l'étant par l'auto-position du sujet—ainsi que l'a fait plus tard Fichte: *Ich = Ich*. Il s'agit bien de tout autre chose. L'identité cogni-

[3] Je m'inspire en partie dans ce qui suit de Bollack (2006), et de Barnes (1993).

tive que revendique, par ex. Charles Kahn, au premier vers du fragment 6, nous le fait entendre: *Cognition and statement must be what-is*, car cette identité cognitive n'est pas *ontique* et reste discursive. Kahn a raison de dire que *Being is Thought* serait une platitude, alors que *Knowing is Being* rend un autre sens: l'expression fait plus que de soutenir que parler, penser et exister sont la même chose. *C'est le discours qui reçoit une existence nécessaire* (Cf. Kahn 1973)[4] . Si l'on cite le vers suivant du fragment 6 du Poème, on comprend dans quelle perplexité nous jette le « dire » de la Déesse: *khrè to legein, to noein t' eon emmenai. esti gar einai. meden ouk'estin* (« Ce qui est utile est de dire que ceci est un étant, de penser ceci comme étant, ce qu'il est possible de faire en effet pour l'être, et ce qui ne se peut pas pour ce qui n'est pas le cas » : *traduction aménagée par nous*). *Eon* est lu alors dans cette traduction comme l'attribut du *to, emmenai* servant de copule. On doit conserver sans doute la forme du déictique (*ceci*) qui renvoie à n'importe quel étant (qu'il soit dit ou pensé): d'autres traducteurs proposent ainsi: *è necessario il dire e il pensare che l'essere sià* (G. Reale); « il faut dire ceci et penser ceci: l'être est » (O'Brien)[5], ou « il faut dire et penser que l'étant est ». La traduction qu'a retenue J. Beaufret est:

> Nécessaire est ceci: dire et penser de l'étant l'être; il est en effet l'être, le Néant au contraire n'est pas. (Parménide, Le poème, présenté par Jean Beaufret 1984, p. 81).

C'est la traduction la plus heideggérienne. Qu'on regarde la substantivation de *emmenai* par Heidegger. En réalité la dualité des emplois a elle-même une force propre, inscrite dans l'unité syntaxique de la phrase. La plurivalence du verbe *être* conjugue d'une part le sens qu'on dit *véritatif*: « il est » signifiant alors: « il est *vrai* que *p*»; et d'autre part le sens *modal*: « il est » signifiant alors «il est possible », au sens de: « il est pensable que *p* » ou « il est dicible » que *p*. La résistance du déictique (*to*) empêche cependant de statuer sur le rôle que nous prêtons à *p*: est-ce une proposition, sachant que par son intermédiaire, nous attribuons à des objets définis des propriétés qui sont autant de déterminations plus engagées que celles imparties à « cet étant-ci » qui est un état de choses (un étant que je désigne et qui forme avec sa désignation un "état de choses")? N'oublions pas que cet étant demeure aux yeux de Parménide quelque chose *qui ne peut pas être empirique* au sens ou nous l'entendons: rien par exemple de ce qui serait une sorte de vérifacteur séparable ou essentialisable, ne vient selon lui garantir la vérité du discours. Dire que « le soleil est » n'est pas moins déterminé à ses yeux, nous dit-il, que « le soleil est un astre lumineux ». C'est de l'Être que nous déterminons ce qui peut se dire et se penser à propos de cet étant déterminé qu'est le soleil: l'être est soleil. Empiriquement, que le soleil brille ou que « la lune soit éclairée par le soleil », comme il l'explique dans la seconde partie du Poème, ne change rien et n'apporte rien de plus à « ce qui est ». Bollack lui-même reconnaît, en dépit de sa brillante reconstitution de la cosmologie naturelle de Parménide, que le « ceci » qu'est toute forme d'étant: « se ferme en quelque sorte sur lui-même », et que cette impression est spéculativement

[4] Je cite ici d'après *Etudes sur Parménide*, ss la dir. de P. Aubenque, Paris, Vrin (1987, vol. 1, p. 210).

[5] Avec Jean Frère (1991, p. 24).

confirmée par la métaphore de la sphéricité de l'Être (« le pronom (*to*) a été associé au « nom » du participe « étant » (*eon*), le transformant, et il fixe ainsi un pouvoir qui se tient dans le langage, qui reste isolé pour soi. L'emploi séparé du « ceci » est souligné: il renvoie à sa double fonction de présenter et de distinguer (…). [en revanche] L'article devant *noein* ajoute cette détermination de l'objet à l'acte qui le formule: ce n'est pas simplement le signe d'une substantivation » (Bollack, *op. cit.* p. 181).

Le déterminant *to* qui revient en effet de façon presque lancinante dans le fragment 8, *ne peut pas nous faire croire, par conséquent, qu'il y aurait une pensée « de » l'étant*: de quelque manière qu'on observe les choses. Et même si l'abstraction est une condition de la visibilité pour Parménide, ce n'est pas *le* « penser » qui est substantivé, comme il s'écrit de façon divagante et déclamatoire depuis Heidegger. La pensée est solidaire des déterminations restrictives du discours: il y a une identité cognitive, mais non pas de « constitution spéculative de l'étant ». Cette analyse très minutieuse du processus de nominalisation peut être envisagé comme un processus *cathartique* de mise à l'épreuve, ou de purification de la langue homérique. La métaphysique de Parménide paraîtra du même coup décourageante: elle pourrait être comprise également comme une sanction poétique archaïque de tout *épistémicisme*. Ce mot barbare se réfère à la thèse selon laquelle toute chose est *précisément déterminée*, même lorsque la science n'a pas encore réussi à fixer son identité et ses frontières[6].

Il est intéressant de comparer cette analyse avec celle de Jonathan Barnes qui ne lit pas du tout de la même manière Parménide, mais qui s'appuie, nonobstant, sur le même genre de précaution doxographique. Barnes n'écarte pas l'usage « existentiel » de *estin*, qui lui semble le plus naturel, au détriment de *l'emploi véritatif*, et il s'accorde parfois pour dire que *einai* (« être ») peut n'avoir pas de sujet *logique*. Pour lui, le « ceci » est *inexplicite*: il ne correspond pas à un référent assignable, mais à un « penser à ». Sa traduction du fragment 6 est: *What is for saying and for thinking of must be, for it is for being, but nothing is not* (Barnes 1993, p. 158). Cependant, nous avons vu que le fragment 8 semble bien renforcer la place du *to*, en affaiblissant cette expression déontique (*must be*). L'hésitation de Barnes ne se devine seulement qu'à l'égard de « ce qui est Φ»: telle ou telle propriété attribuable à un *a* (un « particulier »). Sous ce rapport, il est fort admissible que les choses quand elles sont « ainsi » et pas autrement, qui sont particularisées par leurs propriétés, sont tout ce qui est dicible et pensable. Mais le *particularisme* (il n'existe que des propriétés particularisées) est peu conforme avec d'autres des assertions universalistes de Parménide. Selon J. Barnes, Parménide n'a pas statué dans son contexte sur le point de savoir quels seraient les variantes modales de sa formule:—l'usage *de re* et l'usage *de dicto*—qu'il faudrait retenir pour comprendre la forme d'un argument nécessaire, comme disent les logiciens du Moyen-Âge. Devrons-nous dire: 1/ *si une chose est pensée*, elle aura la propriété d'avoir une

[6] A cette thèse s'oppose celle du vague ontique: les objets sont eux-mêmes vagues, et ne peuvent jamais correspondre à une désignation déictique (par exemple, pour ce nuage atmosphérique qui n'est jamais un ceci). L'épistémicisme est la théorie selon laquelle il n'y a pas de réalité du vague.

existence nécessaire (*de re*), ou 2/ il est nécessairement vrai que toute chose *qui est pensée* existe (*de dicto*)?

Pourtant ce résultat n'est pas très profitable: il ne fait rien que rendre hommage à la nécessité de la *Diké*, consacrant dans le langage l'ordre des mots, et parce que la *necessitas consequentis* (*de re*) est encore une disposition linéaire (on peut écrire: « ce qui est, est nécessairement », mais cela impliquerait « ce qui n'est pas, nécessairement n'est pas »). Barnes ne craint pas, dans cette optique, de conclure que la logique énonciative de Parménide, toute magistrale qu'elle nous semble, est dans l'erreur la plus fatale: la « voie de l'opinion » que Parménide qualifie comme étant celle des hommes « à deux têtes »—ceux qui pensent à la fois l'être et le non-être —, est aussi celle du vraisemblable, du plausible; or Barnes n'est pas loin de croire que l'élimination du possible hors du champ du concevable est corrélative de l'élimination de ce qui est « engendré » dans le réel, où il est possible que ce qui n'est pas encore soit un jour quand même quelque chose; et où le fait qu'Ulysse n'ait jamais existé n'en fait pas moins un être auquel il est « possible » que nous pensions.—Certes, Parménide eût pu répondre que *L'Odyssée* est ce livre où le personnage d'Ulysse est en effet éternisé *sans référence à une entité empiriquement descriptible ou observable*. Toutefois, dans cette lecture, l'*actualisme* de Parménide paraît pleinement dogmatique, et il entraînerait à estimer que le réalisme platonicien est plus cohérent que le sien.

Barnes donne une bonne analyse des usages du verbe « être ». Il replace les emplois courants et montre les implications à long terme du propos de Parménide, ignorant superbement toute la *doxa* heideggérienne—y compris celle qui est préemptée de l'héritage de Karl Reinhardt (*Parmenides*, Bonn, 1916).

> Nous pouvons distinguer entre l'usage complet ou incomplet de « einai »: parfois une phrase de la forme « X esti» exprime une proposition complète; parfois « esti » apparaît dans des phrases de la forme « X esti Y» (où la forme « X esti » est elliptique pour « X esti Y »). Dans son sens complet, einai acquiert d'autres fois un sens existentiel: « ho theos esti » est la phrase grecque pour « Dieu existe »; « ouk esti kentauros » signifie « les centaures n'existent pas ». Dans le sens incomplet, « einai » sert fréquemment de copule et son usage est prédicatif: « Sokrates esti sophos » est la phrase grecque pour « Socrate est sage »; « hoi leontes ouk eisin hêmeroi» signifie « les lions ne sont pas domestiqués ». Beaucoup de commentateurs pensent que Parménide a commis le péché originel d'une fusion, ou d'une confusion, des deux emplois, du prédicatif et de l'existentiel (…). Je ne souhaite pas soutenir que Parmenide était pleinement conscient de cette distinction des usages de « einai » qui n'est advenue à la conscience philosophique que chez Platon. Mais je ne crois pas non plus qu'il ait fondu ou confondu les deux usages. (Barnes 1993, p. 160)

En opérant un redressement fonctionnel, Barnes est forcé de constater que *l'usage prédicatif strict* conduirait à produire un genre de tautologie, mais l'exclusion de toute prédication négative est plus embarrassante: ce n'est pas tant qu'on ne puisse pas dire « ceci n'est pas », c'est surtout qu'on ne saurait énoncer vraiment: « ceci n'est pas F ». L'inférence majeure de Parménide est de soutenir que l'être est « inengendré » sans le faire par le biais d'une négation. « X est inengendré » n'aurait alors pas de sens, puisque les deux assignations (le sens véritatif et le sens modal) paraissent alors contradictoires. Ou plus précisément, *on présupposerait ici que le principe de « non-contradiction » implique l'identité à soi, et non pas l'inverse*.

C'est tout l'objet de la critique de Platon dans *Le Sophiste*. On devrait soutenir à la fois: « il n'est pas vrai que X est engendré » et « il est nécessaire que X soit », comme si l'on affirmait une série de truismes: l'être existe *par soi*, ou la Nature *est*, ou l'Un est *un*—son interprétation excluant même que *to eon*, l'étant, soit un vrai supplétif nominal pour *esti* ou *estin* (Barnes 1993, p. 163). Comme eût dit Raymond Queneau, s'il en allait de cette manière, "un sou est un sou" est un énoncé métaphysique.

Raisonnant sur la nécessité discursive, Barnes émet bien un doute profond qui ouvre sur les réflexions les plus contemporaines, en rappelant que: *not all non-entities are impossibilia* (167). Et il est vrai que si nous disions par exemple: « ce qui n'existe pas (ou ce à quoi on ne pense pas) *ne peut pas*, ou *ne doit pas* exister », nous commettrions une erreur substantielle *de re*. Pour l'illustrer par un exemple simplissime repris de Thomas d'Aquin, « Tout ce qui est vu assis est nécessairement assis »: on pourrait comprendre cette phrase de deux manières: « il est nécessaire que ce qui est vu assis soit assis » (énoncé *de dicto*), et « Tout ce qui est vu assis est nécessairement assis » (énoncé *de re*): dans ce cas, l'énoncé *de re* est manifestement faux (toute chose vue assise ne possède pas la propriété d'être assise). Mesurons les conséquences: *on ne peut pas conclure de ce qui est épistémiquement vrai* à ce que nous voyons, *ni affirmer que ce qui est vrai de la perception visuelle soit ontologiquement fondé* (Thomas d'Aquin 1999, *Somme contre les Gentils,* I, ch. 67). Le voir peut être factif (nous voyons Socrate assis) sans être pour cela vérace: voilà pourquoi l'assertion verbale ne nous servira jamais de prothèse pour percevoir tel ou tel état de choses. Cette erreur est encore semble-t-il commise par G.E.L. Owen (1960) dans un article célèbre, qui fait du *monisme éléatique* une sorte de despotisme de la pensée, qu'il accable par son renforcement du « nécessaire » dans l'acception disant: "ce qui est, doit nécessairement être"[7]. C'est, « ce qui existe

[7] Owen a semble-t-il projeté Aristote sur Parménide, mais il ne l'a pas fait comme J. Barnes sur la dimension expressément discursive du legein, ce qui change tout. Le fragment 2 énonce les deux chemins à suivre : le premier—celui qu'indique la Déesse est : « que « est » et qu'il n'est pas possible qu'il ne soit pas », le second —celui qu'elle proscrit—« que « est » n'est pas, et qu'il est nécessaire de ne pas être ». Il prête évidemment à confusion, et aucune traduction ne le rend convenablement. Owen a tendance à considérer qu'il y a une disjonction modale entre « il n'est pas possible de ne pas exister », et « il est nécessaire de ne pas exister », qui ne sont pas de vraies contradictoires pour Aristote. L'énoncé de Parménide deviendrait assertorique, en excluant « ce dont on ne peut parler, ce à quoi l'on ne peut penser ». Mais il ne dit pas non plus que « la vérité est nécessaire » et qu'il y a un être de la vérité nécessaire, puisqu'on ne pourrait pas l'entendre dans un sens copulatif (= l'être « est » nécessairement vrai), ce qui serait trop lui faire proclamer au sens hégélien. Il faut d'ailleurs ici rappeler qu'un siècle après Parménide, Aristote a donné, au chapitre IX dans le *De Interpretatione* quelques lignes décisives: « Que ce qui est, lorsqu'il est, soit, et que ce qui n'est pas, lorsqu'il n'est pas, n'est pas, voilà qui est nécessaire. Il n'est pourtant pas nécessaire que tout ce qui est soit, ni que tout ce qui n'est pas, ne soit pas. Ce n'est en effet pas la même chose d'affirmer que tout être est nécessairement lorsqu'il est, et d'affirmer, de façon absolue, qu'il est nécessairement. Il en va de même pour le non-être » (19a, p. 23–27). Aristote aurait donc récusé la nécessité de re. Dans sa haute antériorité, Parmenide n'a pas disjoint les deux sens de « dire nécessairement » et « être nécessairement », ou comme on dit aussi nécessité absolue et nécessité relative. Mais l'emploi de *khreôn*: il est utile, il convient, il faut (fragment 2, vers 5), laisse la porte ouverte à toutes les gloses (Cf. Denis O'Brien, op. cit.).

peut ne pas exister », qui serait en principe la formule correcte (Voir la formule converse de Ruth Barcan-Marcus: $\Diamond ((\exists x) \Rightarrow (\exists x) \Diamond Fx)$). L'opérateur porte sur F, dans le conséquent, comme dans « Socrate est sage », mais elle n'exclut pas que Socrate aurait pu ne pas exister, *au même sens où il pourrait ne pas être assis*. Il est toutefois impossible de *démontrer* justement cette formule qui n'est posée que comme un axiome de la logique modale, *parce que la propriété F pourrait aussi ne pas être réalisée (ou accessible) dans un autre monde possible*; il faut (pour qu'elle le soit) admettre que la nécessité soit fixée par un opérateur logique et celle-ci en tant que telle n'est pas *métaphysiquement* justifiée: elle ne l'est que par le calcul). Il n'y a pas de raison métaphysique à considérer l'opérateur modal comme déterminant à lui seul *ontiquement* le possible, ce que nous a rappelé Kit Fine. *On ne confondra donc pas*—Dieu nous en préserve—*la pure existence, l'existence possible et la possibilité que quelque chose ne soit jamais actualisé*. Nous savons que Duns Scot évoquait déjà ces purs possibles qui n'existeraient que dans l'entendement de Dieu, et que reprendra Leibniz. Pour une adaptation moderne, je renvoie ici le lecteur à Priest (2005), dans lequel sont examinés les opérateurs intentionnels et les opérateurs fictionnels qui caractérisent cette position[8].

Mais revenons au centre du texte de Parménide (le fragment 8 et le plus long). Remarquons seulement que Parménide requiert une sorte d'assignation impérieuse que Bollack assimile à une « non-acceptation » (109), plutôt qu'à une négation modale à proprement parler, puisque nous savons déjà, par le fragment 7, qu' « il ne peut pas être dit que « est » n'est pas ». La Déesse indique aux Mortels la seule voie praticable:

> Sur cette voie se montrent des signes fort nombreux, montrant que étant inengendré, il est aussi impérissable—unique et seul de son genre, ainsi que sans tremblement et sans limites. Il n'était pas à un moment, ni ne sera à un autre, puisqu'il est maintenant tout entier, ensemble, un, continu.
> Quelle origine en effet chercheras-tu pour lui ? Vers où, à partir d'où, se serait-il augmenté? Je ne permets pas que tu dises qu'il provient du non-être, ni que tu le penses.
> Voilà en effet qui n'est pas dicible, qui n'est pas pensable non plus: « n'est pas ».
> (Fragment 8, traduction de D. O'Brien)

Sous ce type d'assignation, « ce qui est » (« ceci même » qui est: *to auto*) est posé comme *inengendré, incorruptible, il forme un tout unifié et continu*; il est *complet et fini*—mais il n'y a pas d'antécédent de ce sujet. La chose est assez frappante, nous l'avons vu: les prédicats qui suivent de *hôs estin* (un étant indéterminé: « que *est* ») sont énumérés dans la complétive: « sans naissance », « indestructible », « intrépide », « sans fin », « ensemble », « tout », « un », « continu » (certains prédicats sont positifs, mais d'autres sont principalement des participes privatifs). La *monogénéité* qui n'en est pas, a été discutée par Simplicius qui y voyait une montée vers le néo-platonisme.

[8] A la suite de Meinong, qui distingue le Sosein et le Sein, et après la discussion entre Meinong et Russell, sur le genre d'entités que la logique pouvait revendiquer (et non plus exorciser), une école de pensée dissidente a pu se développer (contre Quine) dans la veine de Richard Routley (1936–1996); elle procède à la réhabilitation de Meinong, en prenant la défense du Nonéisme, qui avait d'ailleurs été déjà exploré par les sophismes de Buridan.

Là où l'on remarque que depuis Kant on se défend de considérer l'existence comme un prédicat, la méditation de Parménide pousse dialectiquement à identifier la pensée et son objet: elle consiste à dire de quoi est fait « ce qui est » (à la place *de ce qui est là*) et contre les fluctuations de l'opinion. En ce sens limitatif, « l'être » n'est donc pas l'apanage d'un infinitif purement verbal, et il n'est vraiment donné qu'en 3e personne: « ce qui est », « que c'est » (on l'a vu déjà ci-dessus du *to estin*: fragment 2, fragment 6). En d'autres termes l'être, de nouveau, ne se dirait d'abord que de cet « étant-ci » (*to eon*), qui tardivement est nominalisé sur une base participiale, sans rien qui lui ajouté cependant. On pourrait ne retenir que ce point de départ: si la prédication qui utilise le « est » (grammatical) est suspendue, elle ne l'est pas pour les prédicats signalétiques du chemin dans le discours « divin » de la déesse. Pourtant, il ne nous semble pas que l'acception existentielle soit rigoureusement *sensée* pour des expressions du genre: « l'être est », ou même « l'étant est » qui sont tout aussi redondants qu'équivoques. Il faudrait plutôt dire que le principe de non-contradiction est le premier qui ait été anticipé *métaphysiquement* dans une formulation ambiguë chez Parménide, en écartant même la relation de l'un au multiple, mais sans se donner pour un principe justement, car son exacte expression est: « ce qui est « est » ce qu'il est—et pas autre chose; ce qui n'est pas « n'est pas » et n'est pas autre chose ». Il n'y a pas de « manières d'être » en résumé pour Parménide. Comme le lui a reproché Aristote, *Parménide restreint tout être à être* l'être en tant qu'être (anticipant les retorses analyses analogiques de le réduplication qui ont hanté le monde médiéval): ce qui signifie naturellement que « l'être en tant qu'être—comme le rappelle Aristote —, n'existe pas dans autre chose » (*Physique*, I,3, 186b); et finalement qu'on ne peut attribuer l'être qu'à l'être même: « si donc l'être en tant qu'être n'est l'attribut de rien<comme le souligne le Stagirite>, si c'est au contraire à lui que tout s'attribue, alors on demandera pourquoi l'être en tant qu'être signifiera l'être plutôt que le non-être » (b, 5–6). Pour Aristote, en résumé, si l'être doit être quelque chose, ce ne peut pas être un *to estin*, un « ce que c'est »: il doit, et il ne peut avoir qu'une *signification multiple*. Il est donc quelque chose, s'il n'est pas rien, et il nous importe que ce quelque chose soit reconnu par ses attributs essentiels et quidditatifs (Aristote va bien d'ailleurs renvoyer le *to* à un *tode ti*, en transformant le simple nom du « ceci », mais pour le rapporter à une *ousia* qu'il suppose concrète). Afin de ne pas succomber à la contradiction, ce discours—qui ne serait en fait sinon que *véridictionnel*, comme on dirait dans le langage d'aujourd'hui —, devrait donc dans l'optique d'Aristote admettre un ancrage empirique. Il n'est pas très sorcier d'imaginer déjà que la même difficulté se représentera à d'autres époques.

Il n'est pas gratuit de le soupçonner: la question de l'être et de l'essence (qui spécifie le genre ou la nature de ce qui est), ou comme on le répète souvent, la question demandant « pourquoi y a-t-il quelque chose plutôt que rien ? », ont été considérées comme plus fondamentales que toutes les autres:—mais en quoi "fondamentales", si ce n'est en ce qu'elles ne sont pas redevables du point de vue anthropologique de celui qui les pose. Le métaphysicien n'est certainement pas le mandataire social d'une réalité qu'on juge économiquement et eschatologiquement

"mystifiée" par ses mutations techniques: ce que déplorait sentimentalement Heidegger. Il n'encourage pas à déprécier les apparences au profit d'un genre de *realitysme* factice et navrant. Présenter la question la plus générale de la « nature » d'une chose (*phusis*), revient toujours assez sobrement à interroger la possibilité de son essence. La thèse la plus courte, à cet égard, affirme donc que le "système du monde" doit être réfléchi par la pensée dans son ordonnancement, mais ce n'est pas là non plus hélas une thèse immédiatement et définitivement admissible. Les sophistes eux-mêmes—et Gorgias en particulier—ont admis au contraire que le langage et l'opinion revendiquaient pour soi, et à l'écart des choses qui circulent (les *pragmata*), la postulation d'une ontologie négative.

Le métalangage qu'ils ont inventé est la *rhétorique* qui est fondée sur le refus d'une conception substantive de l'être, quoique même l'énoncé affirmant que « le non-être est » (et s'il n'est pas justement "quelque chose") reste précisément—qu'on le veuille ou non—un énoncé métaphysique. Il faut ajouter à cet endroit que l'« argument cosmologique » qui est comme la pierre de touche de toute discussion métaphysique (en impliquant une réflexion sur le temps et sur l'ordre, sur l'origine et sur la fin des choses) est ancré dans le plus vieux fonds de la pensée occidentale. C'est celui que Kant présente comme irréductible dans son « illusion » propre; mais celui que Parménide a voulu briser. Les hommes peuvent voir la lune éclairée par le soleil: la métaphysique dans cette acception originaire est donc pour lui une *forme de pensée* qui s'émancipe des racines mythiques. Elle se constitue, dès le départ, pour se confronter au monde des héros et des dieux, et c'est pourquoi il se réfère à Hésiode et à Homère. On a contesté maintes fois la « priorité » de la métaphysique dans le système de la connaissance: cet argument *positiviste* (qui a été inauguré avec certaine éloquence par A. Comte) est fort sérieux, mais il n'est pas dirimant comme le croyait Asclepius. La métaphysique pourrait avoir été historiquement première, mais le fait qu'elle développe des arguments *a priori* (et qu'on puisse ainsi nommer dans un grand nombre de cas la « nécessité » métaphysique comme étant une nécessité *a priori*: une expression que je crois assez simpliste), ne suit pas de cette priorité, et n'entraîne pas qu'il ne puisse pas exister de métaphysique *a posteriori*. Et pourtant, l'expression d'une métaphysique *a posteriori* paraît elle aussi faire injure à l'esprit de la langue: il faudrait plutôt parler d'une métaphysique expérimentale, qui reste *zététique* et qui n'a rien d'empirique.

En résumé, il n'importe pas vraiment d' « archiver » des énoncés métaphysiques. Car certaines archéologies sont coûteusement inutiles. *L'importance de la conception « noétique » de Parmenide est de considérer que l'être n'est pas la matière et que la matière du discours n'est pas une matière « première ».* Cette façon de dire semble scolaire et ne propose au final que deux énoncés négatifs, pour ne pas dire prohibitifs; elle s'inspire d'une lecture chronologique inspirée d'Aristote (celle du Professeur: *Ipse dixit*), mais elle n'est pas foncièrement incorrecte.

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Chapter 31
The Mind–Body Problem in Husserl and Merleau-Ponty

Roberta Lanfredini

Abstract There is a material dimension of subjectivity that constitutes a conscious feature profoundly different from the representational feature. The former corresponds in many respects to what for the contemporary philosopher of mind is the qualitative mind or authentic consciousness (qualia). In the Husserlian phenomenology, non-intentional consciousness is also characterized by its inevitable conjunction with embodiment. However, in Husserl, there are two ways of understanding the living body: the matter of the body and the body extension. In some passages, Husserl suggests that the relationship between the stream of experiences and the body extension can be read as a case of a material a priori thoroughly analogous to the essential link between colour and extension. This analogy, however, leaves the problem of the relationship between material body and qualitative mind completely unresolved. Merleau-Ponty reconsiders the material concept of body as essential and, in doing so, he reintroduces a natural (but not naturalistic) point of view in the phenomenological perspective.

Keywords Mind/body problem · Qualia · Leib in phenomenology · Embodied mind · Husserl and Merleau-Ponty

31.1 The Cognitive Mind

Phenomenological consciousness is, according to Husserl, essentially but not comprehensively intentional. Nevertheless, even supposing that intentional experiences do not exist (sensations, for instance), a consciousness which is not provided with openness to the world, or does not direct itself towards objects, events, and so on, cannot authentically define itself as consciousness.

The notion of intentional consciousness can easily be assimilated to what a contemporary philosopher of mind would call a cognitive and functional mind. There are three characteristics that distinguish consciousness as intentional. The first characteristic is the distinction between immanent or reflexive intentionality and transcendental intentionality. In Husserlian phenomenology—whose method consists

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in overcoming or suspending the natural attitude through the phenomenological reduction—reflection is the main instrument that allows the passage from the naturalistic object to the priority dimension of the subjectivity (noetic side). And it is still reflection what allows phenomenology to extend its analytical field from experiences to the intended object—the object-in-the how of its determinations and of its ways of givenness (noematic side).

Husserlian phenomenology assumes the operating of the reflective-philosophical attitude as non-problematic and undisturbed, taking for granted that consciousness has always the possibility to exert a sort of doubling or almost duplication of itself: as consciousness that lives its own stream of experience (hence, primary), and as consciousness that reflects on those experiences as object of phenomenological viewing (hence, secondary).

The second characteristic is the necessary dependence of the object intended on the determined point of view. Consciousness, as far as it is intentional, is not, as Nagel would put it, a "vision from no place", a "naked" perception of the object, but rather a perspective cut on things. It is not possible to perceive, to imagine, to judge, and to feel a feeling towards something unless by specifying the determinations, which amounts to embracing in an essential way a point of view. The third characteristic is the independence of the intentional consciousness from the existence of the object towards which it is addressed. We can, as we know, not only imagine entities that do not exist (the golden mountain, the fountain of youth) but also perceive objects that do not exist, as it happens during hallucinations.

Putting intentionality at the centre of the phenomenological description, as Husserl does, means to identify the root of consciousness in its representational activity. That "every act is a representation or is founded on a representation" is considered by Husserl, and before him by Brentano, as an unavoidable principle of the philosophical and phenomenological analysis. Consciousness is not truly consciousness if it lacks the strength to direct itself towards something "else" with respect to itself—a strength that is supplied by its very internal structure—namely its noetic framework. It is something very similar to what nowadays we would call the function of the mental, namely its role within the cognitive economy and in our relationship with the word.

31.2 The Qualitative Mind

Husserl's answer to the question if all the states of consciousness are intentional is, in contrast with Brentano, negative. Many experiences are intentional, but many others are not. Perception, imagination, and emotions, such as fear, are intentional without any doubt, but sensations of pain, anxiousness, depression, angst, and panic are not intentional states. If I say "I am afraid" it is obvious that someone would asks me: "Of what?" but if I say: "I feel depression" or "I have a panic attack", the question seems not so obvious anymore. They would say that in these cases, as a matter of fact, it is what is not in that openness to the world that characterizes consciousness in its intentional function. Consciousness is in a way close in its own feeling.

The existence of non-intentional experiences allows us to isolate feeling as a further dimension of subjectivity; feeling, an element that seems to be—at least to the analytical view—distinct from the intentional structure of experience. The intentional and representational function does not fill the notion of consciousness completely. There is in fact—soul and propulsive centre of every consciousness—a non-intentional sensorial, impressive, material, and passive dimension, which suggests a conscious feature profoundly different from the active, explicit, transparent, schematic, and functional dimension—in one word, a representational feature.

The result is that the sensual and qualitative element is spread if not put in a shape, amorphous and formless if not collocated within a structure and, as Kant says, blind if with no concept.

Husserl does not make any exception with respect to this trend and recognises in the insightful content the necessary presence of the material element (*hyle*), essential if aimed to the fulfilment of an empty intention and, nevertheless, actually non-separable from the intentional shape. It is this latter one that, by shaping and animating the sensorial content evidently not shaken on its own, supplies the act with its intentional direction, hence giving it a determination of its own. Sense becomes hence strictly interlaced with the representational power of consciousness, with its ability to present something.

Consciousness, for Husserl, renders the object present and, by doing so, gives to the world its own order and sense, allowing that passage from the chaos to the cosmos that characterizes the phenomenological vision. The material aspect of subjectivity corresponds to what for the contemporary philosopher of mind is the qualitative mind or authentic consciousness—not the mental or the psychological function, then, but the qualitative dimension of subjectivity; that dimension which, according to a lot of philosophers of mind, is the true *hard problem* of the discipline, the enigma, the mystery, the apparently irreducible element with respect to the scientific image of the world. From a qualitative point of view, the subjectivity is not so much characterized by what it means as by what it feels.

Material phenomenology offers a dramatic limitation of the absolute priority of the intentionality, a priority that as a matter of fact would lead to a necessary resizing of the sensual, impressive, and affective element. On the other hand, the material aspect of subjectivity also resizes the strength of the reflexive and reductive attitude. In fact, the latter can focus only on the *noesi* meant as an intentional and functional structure of the act. It does not reflect itself just on the sensations that oppose themselves, according to their own nature to any distances, to any possibility of "face to face". The object of reductive reflection is only the sensitive datum, the *noematic* datum. However, the latter is not the sensation but the result of its animation, interpretation, and projection into the world, not the sensual element but its objectification. What can be made the object of reduction is hence, eventually, only the *noetic* structure, the functional frame of the act, not its material content.

There are two consequences that emerge from what has been said. The first one concerns the impossibility of making the material content the object of an autonomous reflection and, as it follows, the impossibility of making the object of knowledge a qualitative datum without its being shaped and interpreted by an intentional

structure. The second consequence concerns the necessary introduction of the notion of embodiment aiming to take into account the two elements characterizing immanence itself. The first one is that the material or hyletic dimension of knowledge necessarily supposes the existence of a body that feels. The lack of transparency of consciousness is given by its inevitable conjunction with embodiment. The second one is that the same functional structure presupposes the existence of a body that, through movement, allows the synthesis of the appearances constituting objects.

Those are conditions that also necessarily presuppose an a priori link concretely founded on the specificity of the content of the involved elements. In other terms, it seems that, in order to take into account both consciousness in its relationships between material content and functional content, and the relationship between consciousness and the body, the material a priori would be the philosophically relevant point.

31.3 The Living Body

The psychic dimension is, according to Husserl, legally connected with embodiment. The living consciousness and the embodied consciousness are the results of this essential and necessary connection. The notion of *Leib* widens the pure immanence of the "stream, with no beginning or end, of '*lived experiences*'" (Husserl 1989, p. 98), to its diffusion into the body with respect to which that stream results necessarily connected. The notion of living body embraces nevertheless two elements: the matter and the body extension. Each of them interlaces a different relationship with the immanence of the stream of consciousness. To be objectively experienced, consciousness needs to result in the living factor of an objectively living body, even if not a priori and necessarily of a material living body. In other terms, only between a flux of experiences and a body extension a relationship occurs which is not empirical but a priori.

On the one hand, hence, the result of the union between stream and *Leib* (meant as a material body) is the empirical subjectivity, with its psychical states, its personal characteristic, its behavioural dispositions, and so on. On the other hand, the result of the union between stream and *Leib* (meant as body extension) is not the empirical subjectivity, but the living body in general. So, according to Husserl, the mind–body problem is in reality a double problem, articulated, at least at first sight, in two different problems: (a) the naturalistic problem of the relationship between consciousness and material body and (b) the phenomenological problem of the relationship between consciousness and body intended as living body. It is, hence, the notion of body what constitutes the focus between the phenomenal or qualitative dimension and the cognitive or intentional dimension of the mental.

The living body is in fact, in its turn, a heterogeneous entity. On the one hand, because it plays an essentially kinaesthetic role, the body is a disembodied body scheme endowed with functional and constitutional tasks. On the other hand, because it expresses its own feeling nature and it is a living consciousness, the organism immerses itself in a perceptive world, essentially passive and receptive.

Also for phenomenology, however, once we take distance from the naturalistic view expressed by the relationship between empirical consciousness and material body, two problems arise. The first is to clarify both the material body and the living body (or living and embodied consciousness). The second problem is to clarify the relationship between the living body and the body scheme (or kinaesthetic body). This implies identifying also within phenomenology itself, even in a different configuration, a problem relative to the qualitative states.

31.4 Mind, Body, and Material a Priori

The essential link that exists between the stream of experiences and the body extension in Husserl's phenomenology seems to be read as a case of the material a priori thoroughly analogous to the essential link between colour and extension. Affirmations such as "a colour cannot exist without a certain extension" or "there's no timber without duration" involve modalities of connection between non-independent contents—modalities that are founded on the essential specificity of the parts that compose the whole. Hence, the disjoint moments of the phenomenon do not give themselves but in connection with other moments (and just for this, they cannot be represented separately) and differently from contents that, even if not in fact, can be in principle separated from what surrounds them. In this sense, it seems admissible to argue that the integration between moments or non-independent parts satisfies a necessary material law: the essential impossibility to represent a colour without extension is an impossibility which is philosophically different from the actual and empirical impossibility that I have to represent, for example, the visual datum without the background from which that datum acquires emphasis.

The relevant notion is, in this case, to be "effectively content": its diffusion in an extension (logical material link) is actually contained in the colour, whereas its being linked to a determined background (empirical link) is not effectively contained in a determined colour surface. In the former, it is about inner differences that fuse themselves on the pure essences of the thing. Hence, it is about modalities of a priori connections in the sense that they fuse themselves on the essential specificity, on the nature of the parts that compose a whole.

The foundation relationship between moments or non-independent parts composes the material logic that gets the name of material a priori. Now, the logic involved when we talk about the relationship between mind and body in Husserl's phenomenology would seem to be just this:

> The form is, however, in every situation a qualified one. Qualities are what fills, they extend over the surface and through the corporeality of the form. Qualifications, however, extend from the things into empty space: *rays of light, radiations of heat,* etc. That means that thingly qualities condition qualities and qualitative changes in other things and indeed do so in such a way that the effect is a constant function of the situation: to every change of situation there corresponds a change of effect. In virtue of such a subordination to spatial relations which may be determined with exactitude, even the sense qualities become amenable to exact determination. (Husserl 1989, p. 89)

Equally, a stream of consciousness without materiality is legally possible—it is a proof, according to Husserl, of the logical possibility of ghosts, without materiality and nevertheless with body scheme:

> If thereby the a priori (although entirely empty) possibility of the actual ghosts is granted, then the immediate consequence is that a psychic subject without a material Body is indeed thinkable, i.e., as a ghost instead of a natural animal being, but in no way without a Body of some kind. (Husserl 1989, p. 101)

But a stream of consciousness without a body scheme is legally impossible. The psychical stream, to be objectified, has to cover (or spread in) an own body. The essential link is not, hence, for Husserl, between psychical and physical, between mind and material body, but between psychical and body scheme.

From the point of view of being given, or of being objectifiable, the psychic layer cannot be disembodied, that is, it cannot be separated from its body extension. The expression "cannot" is not empirical but a priori. A stream that does not "spread" in a body extension is a countersense exactly as a colour that does not spread on a surface. The psychical is given, hence, in its essential connection with the corporeality (and in its empirical connection with the materiality) and the result of this inseparable link is the living body:

> It is in connection with what is material that the psychic is given to us. Among material things there are certain ones, or from an eidetic standpoint there are certain ones a priori possible, which are soulless, "merely" material. On the other hand, there also are certain ones which have the rank of "Bodies" and as such display a connection with a new stratum of being, the psychic stratum, as it is called here. What is included under this heading? What experience first discloses to us here is a stream, with no beginning or end, of "lived experiences" of which manifold types are well known to us from inner perception, "introspection", in which each of us grasps his "own" lived experiences in their originality. (Husserl 1989, p. 98)

In addition, the actual experience of a merely material thing, not animated by the psychical, confirms, for Husserl, the priority of a pure I, immaterial and disembodied: a pure I caught properly through a reflective conversion of look; a pure I that does not generate and does not overgo but "enters and goes out of scene"; a pure I that does not hide in its own secret and interior richness, that is absolutely simple, that is absolutely in light; a pure I that is not living consciousness, feeling consciousness, body as taker of localised sensations, but, we could say, centre of functions—an intentional structure adequate and transparent towards itself.

In this sense, it is admissible to talk about the privilege of the psychical, exactly as it is admissible to talk about the privilege of the colour of the timber with respect to its surface, the latter being a sort of substrate in which the various *plena* (visual, audio, sound) spread themselves.

31.5 Which Body in Phenomenology?

I am going to try to summarize what has been said. There is a kind of priority of the psychic, but not the possibility to segregate the psychic layer from body layer. With respect to its being objective, the psychic must be inextricably (in the sense

of the a priori legality) tied to the body. To deem the link between mind and body as somewhat unbreakable does not imply a similar indissolubility between psychic and material.

The empirical impossibility of a stream of consciousness without a material body should not be confused with an a priori impossibility. This last one exists only between a stream of consciousness and body extension. The object of pure phenomenology is the connection between mind and extension, not the connection between mind and matter. It is that connection which gives a rise to the living body or, which is the same, to the embodied mind.

The application of the concept of the material a priori to the mind–body problem in the phenomenology of Edmund Husserl allows us to distinguish analytically both the points in question (cognitive mind, qualitative mind, matter, extension) and the relationships (empirical and a priori) that exist between those elements. The application of the concept of material a priori to the mind–body relationship shows, on the other hand, also the limit of its conception, in reference to the emerging concept of embodiment. At a closer look, the mind–body problem in Husserl has four subordinated problems: (a) the problem of the relationship between cognitive (or intentional) mind and material body, (b) the problem of the relationship between cognitive (or intentional) mind and living body as body scheme, (c) the problem of the relationship between cognitive (or intentional) mind and the feeling body (qualitative mind), and (d) the problem of the relationship between material body and qualitative mind.

Now, Husserl's phenomenology seems to account mainly, if not exclusively, for the functional and structural aspects of both the mental and the corporeal: on the one hand intentionality as basic structure of the mental and on the other the kinaesthetic body as the basic structure of the body. Therefore, there are two main *hard problems* in the phenomenological perspective: (1) *the mind–body problem*—the problem of the relationship between the material part of the concept of body and the two-side concept of mind and (2) *the mind–mind problem*—the problem of the relationship between the intentional mind and the iletic, qualitative mind, between the essential (formal) part and the non-essential (material) part of consciousness.

The link between the body scheme (not material body) and the qualitative mind is analogous to the link that subsists between the colour and the extension or space (*material* a priori). But the *hard* problem here is that the body scheme is not sufficient to explain the whole concept of body. The *hard problem* concerns the notion of matter, the notion of material body. And the material body is an essential condition to feeling something, to have an intuition of something. Then, the central problem is the role of the natural, material, concrete notion of the body. The problem is not about the essence of the human being but about the nature of the human being.

This role is completely removed by Husserl and this fact marks the difference between the naturalistic approach and the phenomenological approach. The problem is that without an *integrated* concept of body it is possible to resolve neither the mind–body problem nor the mind–mind problem. For the last resolution, a paradigm change is necessary, in the sense theorized by Kuhn. This change reintroduces a material concept of body in the phenomenological perspective.

31.6 The Flesh of the Body

The central point, in the Merleau-Ponty's phenomenological approach, is the crucial notion of the *flesh* in place of the notion of body. In phenomenology, the concept of body is strictly connected to the notion of extension and then, ultimately, to an a priori link. On the contrary, the concept of flesh includes the crucial presence of transcendence in the stream of consciousness. This marks exactly the difference between Husserl's phenomenology and Merleau-Ponty's approach.

In philosophy of mind, there are two main problems within the naturalistic perspective. First, there is the problem of explaining the phenomenological content of the consciousness. Second, there is the problem of explaining representational or intentional content. Between the two, only the first problem is considered *the hard problem* of the philosophy of mind. We have seen the existence of the hard problem inside Husserl's phenomenology, a problem inherited from Descartes. The problem concerns the central notion of feeling and its relation to the body. Both in Descartes and Husserl there is a clear distinction between intellective cogitationes and sensitive cogitationes, between thinking and sensing, and between intentional content (comprehensive of the body and its movements around the objects) and hyletic content—the *what it feels like* problem that Nagel speaks about.

A philosophical account of *what it feels like* needs a new concept of the body, a more material concept than the phenomenological one. We can find this concept in the notion of flesh as proposed by Merleau-Ponty and in the change of paradigm that this notion presupposes. The mind is inherently embodied. This crucial thesis, that is one of the major discoveries of the cognitive sciences, characterizes Merleau-Ponty's thought. The crucial point here is that the new phenomenological notion of the body is largely a natural, material, concrete one. As Lakoff and Johnson said,

> Reason is not disembodied, but arises from the nature of our bodies and bodily experience. This is not just the innocuous and obvious claim that we need a body to reason; rather, it is the striking claim that the very structure of reason itself comes from the details of our embodiment. (…)
> In summary, reason is not, in any way, a transcendent feature of the universe or of disembodied mind. Instead, it is shaped crucially by the peculiarities of our human bodies, by the remarkable details of the neural structure of our brains, and by the specific of our everyday functioning in the world. (…)
> The phenomenological person, who through phenomenological introspection alone can discover everything there is to know about the mind and the nature of experience, is a fiction. (Lakoff and Johnson 1999, p. 4)

Merleau-Ponty's epistemology sets a considerable limit to some of the conceptual tools employed in Husserl's phenomenology, such as those expressed by the notions of intentionality, constitution, reflection, and transcendental, and it gives stability to others such as those represented by the notions of passivity, genesis, motivation, and sedimentation, while noticeably extending their meaning. In many respects, concepts with a critical role in Husserl's phenomenological epistemology find a deeply different orientation in Merleau-Ponty. As Husserl's phenomenology, Merleau-Ponty's epistemological project is radically anti-reductionist and deeply anti-naturalistic.

> Scientific points of view, according to which my existence is a moment of the world's, are always both naïve and at the same time dishonest, because they take for granted, without explicitly mentioning it, the other point of view, namely that of consciousness, through which from the outset a world forms itself around me and begins to exist for me. To return to the things themselves is to return to that world which precedes knowledge, of which knowledge always speaks, and in relation to which every scientific schematization is an abstract and derivative sign-language, as is geography in relation to the countryside in which we have learned beforehand what a forest, a prairie or a river is. (Merleau-Ponty 2002, p. ix)

However, in contrast with Husserlian phenomenology, Merleau-Ponty's anti-reductionist attitude and anti-naturalism do not involve the suspension, or the bracketing, of the natural stance. In a different way, the anti-naturalism professed by Merleau-Ponty has the aim to recover and preserve the natural stance, as well as a space for the pre-categorical thought within which consciousness, by its nature and genesis, inhabits.

In other words, for Merleau-Ponty, in contrast with Husserl, the naturalization and the natural stance do not follow the same path. The naturalization implies a process of conversion, that is, the translation of something derivative and secondary (for example, the phenomenal and qualitative world) into something considered epistemologically basic and grounded (for example, the world described by the physics). Instead, the natural stance reveals the necessity of an immersion in the broader context of nature, a process required if we want to give a full and authentic account of these "things" that phenomenology aims to describe from a morphological point of view.

The exclusion of the natural stance involves a description of things which is very similar to the one provided by a map, which is to a particular region what geography is to a landscape. Accordingly, the segregation of the natural dimension, in addition to the rebuttal of a natural attitude, bears the risk of draining the content of the experienced thing, while showing the image of a disembodied object deprived of its flesh, that is a mere functional element with no depth.

In philosophy of mind, the rebuttal of the naturalistic stance, as well as the assumption of a natural attitude, involves a departure from the supposition that the physical states, e.g. the neuronal states, are primary and irreducible elements. At the same time, this involves a departure from a kind of *anti-reductionism* which, on the contrary, considers the states of consciousness as primary and irreducible, that is, as free elements independent from any natural position.

It is interesting to observe that anti-reductionism, as stated by Husserl, implies the assumption of a reductive stance. Definitely, in certain respects, the concept of phenomenological reduction has a meaning contrasting the concept of reduction used in philosophy of mind. Phenomenological reduction requires giving up, or at least taking distance from, the natural stance (the scientific and object-oriented attitude) emphasized by reductionism in philosophy of mind.

However, as paradoxical as it may sound, phenomenological reduction and reduction in philosophy of mind share a critical aspect that justifies, at least in part, their homonymy: both of them affirm the necessity of a radical departure from the *natural stance* (in the case of phenomenology) and from the *manifest image* (in

the case of philosophy of mind). Starting from this shared necessity, phenomenological approach and reductionism in philosophy of mind turn into two antithetical paths: the former establishes the priority of conscious experience and considers the physical states—including the neuronal states—as secondary and derivative, while the latter establishes the priority of the physical states and considers the states of consciousness as derivative and, according to some of its defenders, not existing and illusory, and therefore eliminable.

Assuming this point of view, the absence in Merleau-Ponty's works of a process of reduction—also of the phenomenological one—is perfectly clear. To endorse a philosophical project characterized by a radical anti-naturalism is not to deny the natural character of the consciousness. In this basic methodological distinction, a critical change of paradigm can be summed up by noticing that on the one hand the exigency of Husserl's phenomenology was that of disentangling the subject from the *world,* and that on the other hand Merleau-Ponty's phenomenology is concerned with completely immerging the subject in the world, while restoring the natural bilateralism between thought and the environment that an original phenomenological description should always preserve.

The reflective subject of the Husserlian phenomenology, that is, the subject conceived as the condition of possibility, rather than the bearer, of an actual experience is the result of an analytic reconstruction and not of an original phenomenological description. In contrast with this paradigm, in Merleau-Ponty's phenomenology, there is no absolute priority for an impenetrable and objective reality, as well as there is no absolute priority for the idea of a subject conceived as a constitutive power, that is, as an invulnerable inwardness that can be reached through a backward walk.

Merleau-Ponty transforms the correlative analysis, typical of the Husserlian phenomenology within which the structure of consciousness is the basic element, in a bilateral analysis according to which both the subjective and objective poles require a foundational priority. Accordingly, he extends the methodological approach from a perspective that privileges the external frame of the experience to a perspective that fills that frame with an actual content.

In this view, the constitutive structure, or the reflective component, is progressively placed side by side with the domain of the unreflecting, and the transparency of representation with the opacity of the feeling. The expressible character of the structured datum shows the relevance of the dumb, tacit, unexpressed, and inexpressible nature that the experience inexorably brings with itself. This is a powerful change of perspective that makes it possible to transform puzzles in philosophy of mind (as in the case of the "question" of *qualia*) into "genuine" problems.

On the other hand, as noticed by Kuhn, the conversion of a puzzle into a problem becomes possible only when a change in the theoretical and conceptual background happens, a change that opens the door to a different definition of the problem and not to other solutions of the same puzzle.

This conceptual change is evident in the way Merleau-Ponty faces the problem of sensations as opposed to the puzzle of *qualia*. As it is well known, because of their subjective nature (intrinsic, private, and hardly reducible to a third-person

perspective) and their essentially qualitative character (direct, immediate, and so ineffable), *qualia* are considered in philosophy of mind the only and genuine *hard problem*. But Merleau-Ponty's phenomenology adds another trait, maybe the most important, to those standard features usually ascribed to *qualia*. Qualia are essentially and not accidentally associated with the subject's embodied dimension, that is, to the possession of a lived body contrasting with the mere possession of a physical body (as in Descartes's philosophy). The introduction of the body establishes the role of the natural subject, that is, the role of the embodied, situated subject relative to which both the notions of reduction in philosophy of mind and phenomenological reduction appear to be inadequate.

On the other hand, the introduction of the body determines an epistemological shifting from the above-mentioned puzzle of qualia to the problem of sensations:

> There are two ways of being mistaken about quality: one is to make it into an element of consciousness, when in fact it is an object for consciousness, to treat it as an incommunicable impression, whereas it always has a meaning; the other is to think that this meaning and this object, at the level of quality, are fully developed and determinate. (Merleau-Ponty 2002, p. 6)

According to Merleau-Ponty, it is necessary to reconsider the question of sensitivity as a genuine problem: This is not a question concerning the possession of inert qualities or contents defined by well-marked boundaries. Contrasting the identification of the notion of sensation with that of *quale* assumed as a reply to external stimuli, the sensitivity is not something determined, instantaneous, and detailed, but it is vague, ambiguous, and indeterminate. On the other hand, for Merleau-Ponty, it is not correct to consider the domain of sensitivity as intrinsically formless and structureless except when a theoretical and meaningful system intervenes to check the rush and chaotic sphere of sensorial stimuli.

This is the idea of a great part of post-neo-empiricist epistemology, according to which, to be accessible, the datum should be interpreted and embedded in a circle of hypotheses and background theories. On the contrary, according to the idea proposed by Merleau-Ponty, the sensible datum is not tied to a theoretical and conceptual apparatus but shows a proper structure of its own, even if flowing and ambiguous.

The sensible and perceptive field—that the qualities inhabit—far from representing the immediate result of an external stimulus, or a mere reply to an external situation, depends on specific variables such as the biological sense of the situation. This makes the sensible experience a critical process analogous to that of procreation, or that of breathing and growth. The things are for Merleau-Ponty *flesh* and not mere *bodies,* they are not mere extensions or bodily surfaces covered by specific qualities. Accordingly, the sensations are not a mere reception of qualities but represent a vital inherence; they do not offer inert qualities but active and dynamic properties characterized by a proper value related to their functional role in preserving our life:

> The pure quale would be given to us only if the world were a spectacle and one's own body a mechanism with which some impartial mind made itself acquainted. Sense experience, on the other hand, invests the quality with vital value, grasping it first in its meaning for us, for that heavy mass which is our body, whence it comes about that it always involves a reference to the body. (Merleau-Ponty 2002, p. 8)

The identification between *qualia* and sensitivity derives from a process of alienation suffered by the concept of body that inevitably leads to the levelling off of both the notion of consciousness and the notion of experiential thing. In contrast with this view, the embodied thought becomes the result of a circular conception of experience and knowledge. This is a conception within which the experience assumes an insight that neither the Husserlian notion of *plena,* nor the notion of *qualia* in philosophy of mind are able to show. Specifically, in the first case, the former notion is too close to an extensional idea of the qualitative element; in the second case, the latter notion is too close to the empirical notion of sensible datum and to a physiologic and mechanistic interpretation of sensation.

The idea of sensation assumed as a filling quality and the idea of the sensation assumed as the phenomenal and qualitative reply to an external stimulus contribute to levelling out the domain of experience, draining and atrophying its own sense, that is, the idea of sensitivity as a living rhythm—sensitivity that, in order to be understood, cannot be divorced from the analysis of the notions of body and embodiment, together with the awareness of the radical change of paradigm introduced by them.

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Chapter 32
Locke and the Problem of Weakness of the Will

Richard Glauser

Abstract I defend three interconnected points relating to Locke's discussion of akrasia in the *Essay Concerning Human Understanding* (II 21). First, insofar as Locke's account of weakness of the will calls for some sort of freedom, the freedom required is freedom of thinking, not freedom of willing. Second, Locke's conception of akrasia is relatively mild in that it does not involve a particularly deep form of practical irrationality. Third, although in the second and subsequent editions of the *Essay* Locke loosens the strong connection between judging and willing that was characteristic of the first edition, it is mistaken to claim that Locke entirely renounces intellectualism. What remains of intellectualism accounts for the mildness of Locke's conception of akrasia.

Keywords Locke · Akrasia/weakness of the will · Action · Irrationality · Freedom

The chapter of Locke's *An Essay Concerning Human Understanding* that deals with the question of the will and freedom (II 21, "Of Power") underwent extensive revisions during the *Essay's* five first editions,[1] some of which are acknowledged by Locke in II 21 § 35, §§ 71–72, and in the Epistle to the Reader, where he says: "I have found reason somewhat to alter the thoughts I formerly had concerning that, which gives the last determination to the *Will* in all voluntary actions".[2] In the first edition, Locke held an intellectualist theory of moral psychology. Let us call "intellectualism" a theory according to which an agent's conative states and attitudes towards certain goods (or evils) are determined, at least in part, by his/her evaluative judgements about the goods (or evils). Locke's version of intellectualism in the first edition was that one's volitions to act are directly caused by one's ideas, or rather judgements, of good and evil: "*Good*, then, *the greater Good is that alone which determines the Will*" (II 21 § 29, 1st ed.); "the preference of the Mind [is]

[1] Most of the textual alterations were made in the second (1694) and fourth (1700) editions, and prepared for the fifth (1706), which was to be posthumous. The single greatest textual revision concerns §§ 28–38 of the first edition, which were replaced by §§ 28–60 in the second. Parts of the original 11 sections survived, however, and were variously relocated in the second edition.

[2] (Locke 1975) *Essay,* 11. Unless otherwise indicated, future references to the *Essay* are to II 21.

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always determined by the appearance of Good, greater Good" (II 21 § 33, 1st ed.). According to this position,

> If S judges that X is a greater good than Y, and if S judges that S can perform either an act A in order to attain (to bring into existence or to otherwise promote) X or an act B in order to attain Y, and if S is prepared to act now in order to do either A or B, then S's judgement determines a volition to do A.

A seemingly important implication of this intellectualist position was pointed out to Locke by Molyneux in a letter of 1692: "you seem to make all sins to proceed from our understandings, or to be against conscience, and not at all from the depravity of our wills", hence "a man shall be damned because he understands no better than he does".[3] Locke took Molyneux's objection seriously, for he duly revised II 21 and in the second edition he amended his moral psychology so as to avoid the implication that "all sins […] proceed from our understandings".[4] His amended moral psychology also attempts to account for the mental dysfunction described by Ovid's famous sentence: "*Video meliora, proboque, deteriora sequor*" (§ 35), commonly called "weakness of the will", or "akrasia". There is no doubt that Locke took Ovid's phenomenon seriously, for he says that the truth of the sentence is "made good by constant Experience" (§ 35).

Locke's task was not an easy one, however. For, although he asserted freedom to act and freedom of thinking, he was by no means prepared to renounce his staunch denial of freedom to will, which he had developed in the first edition and which he retained in all subsequent editions of the *Essay,* albeit with modifications brought to his initial arguments against it.[5] Thus, as of the second edition, Locke sought to make room for an account of weakness of the will whilst at the same time denying freedom to will. That being so, according to Locke, akrasia is something we are responsible for, and responsibility calls for some sort of freedom.

I shall defend three interconnected points. (1) Insofar as Locke's account of weakness of the will calls for some sort of freedom, the freedom required is nothing over and above freedom of thinking; it is not freedom of willing. (2) Locke's conception of akrasia is relatively mild in the sense that it does not involve a particularly deep form of practical irrationality. (3) Although in the second and subsequent editions of the *Essay* Locke loosens the strong and direct connection between judging and willing that was characteristic of the first edition, it is mistaken to

[3] (Locke 1976–1989) *The Correspondence of John Locke*, Vol. 4, letter 1579, p. 601. Hereafter, references to Locke's letters will be to CJL followed by volume, letter, and page: thus, CJL 4, 1579, 601.

[4] It is difficult, however, to determine just how seriously Locke took Molyneux's objection. Even in the first edition, Locke was arguably not committed to the conclusion that "a man shall be damned because he understands no better than he does", because, according to *Essay* IV, we have the epistemic duty of judging according to *all* the probabilities available to us, and doing so is a matter of employing our freedom of thinking by *willing* to find out all the probabilities we can discover, and of willing to examine them carefully before judging.

[5] Cf. Glauser (2003). Furthermore, Locke cannot take the expressions "depravity of our wills" and "weakness of the will" literally, because depravity and weakness are dispositions, and the will is a power. Locke, as is well known, denies that a power can be the bearer of another power (§ 14). Only a person, an agent, can be depraved or weak; a power cannot be. In fact, Locke makes no use of these expressions in the *Essay*. On this matter, cf. Chappell (1994, p. 201).

claim, as some commentators do (though not Chappell: Cf. Chappell 1994, p. 203), that Locke entirely renounces intellectualism. His new position retains a significant streak of intellectualism, although it is no longer situated, as in the first edition, between evaluative judgements about goods and volitions, but between some such judgements and desires. What remains of intellectualism, I shall argue, accounts for the mildness of Locke's conception of akrasia.

In the first section, I briefly discuss the changes Locke brings to his moral psychology as of the second edition. In the second section, I focus on Locke's position regarding weakness of the will.

32.1 Three Alterations Made to the Second Edition

The alterations that Locke brings to his moral psychology concern: (1) the causal role of the psychological state of uneasiness, (2) the fact that the strengths of our desires for certain goods are not necessarily proportionate to the judged greatness of those goods, and (3) the power to suspend one's desires. All three are essential to Locke's conception of practical rationality in general, and to his account of akrasia in particular.

(1) Regarding the first issue, here is how Locke presents his change of mind and introduces his new position in the second edition:

> To return to the Enquiry, *what is it that determines the Will in regard to our Actions?* And that upon second thoughts I am apt to imagine is not, as is generally supposed, the greater good in view: But some (and for the most part pressing) *uneasiness* a Man is at present under. This is that which successively determines the *Will*, and sets us upon those Actions, we perform. (II 21 § 31)
>
> It seems so established and settled a maxim, by the general consent of all Mankind, That good, the greater good, determines the will, that I do not at all wonder, that when I first publish'd my thoughts on this Subject I took it for granted; and I imagine, that by a great many I shall be thought more excusable, for having then done so, than that now I have ventur'd to recede from so received an Opinion. But yet, upon a stricter inquiry, 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. (II 21 § 35)

Thus, as of the second edition, what immediately determines a volition is no longer the idea of a certain good judged to be greater than others, but a conative, motivational state: an uneasiness closely connected to a desire for some absent good represented by an idea. So, in the second edition Locke says: "Good and Evil, present and absent, 'tis true, work upon the mind: But that which immediately determines the *Will*, from time to time, to every voluntary Action, is the *uneasiness* of *desire*, fixed on some absent good" (*Essay*, II 21 § 33).[6] Thus, the uneasiness of desire is

[6] Bennett rightly notes that Locke is unclear whether uneasiness is identical with desire, is a cause of desire, or an effect of desire. Locke seems to vacillate between the three possibilities (cf. Bennett 1994, pp. 96–97). So, let us say merely that uneasiness is always closely connected to a desire inasmuch as there is no desire without some uneasiness, however faint.

fitted into the psychological causal chain as an intermediate link between the idea of a good and a volition to act in order to attain that good. Accordingly, the general theory of uneasiness depends on two claims that hold for the explanation of ordinary action as well as for cases of akrasia: (1) Two uneasinesses cannot simultaneously cause two volitions, for we are "capable but of one determination of the will to one action at once" (§ 36) and (2) whenever an agent has different uneasinesses at the same time, the uneasiness that "has the precedency in determining the will" is "that *ordinarily*, which is the most pressing of those, that are judged capable of being then removed" (§ 40, my italics).

Here, it is important to remember Locke's distinction between desire and volition. A desire always aims at a certain good, which is to be attained by acting in a certain way.[7] A volition, however, directly aims at nothing more than some type of act which the agent believes he can perform, and which he believes is, or is conducive to attaining, a desired good.[8] Whereas "Desire is directed to the agreeable, […] Will is directed only to our actions and terminates there" (CJL 7, 2925, 327).[9] Because one can have several conflicting desires at the same time, each aiming at a different good, whereas one can have only one volition at a time, one can quite well desire several goods without willing, or trying to act in order to attain them. Although a volition depends on a desire, not all the desires we may simultaneously have cause a volition. Hence, it is possible to have desires that are contrary to one's present volition, because they run contrary to the desire that determines the volition to act in a certain way. Without such a distinction between desire and volition, one could not explain coerced or constrained voluntary action, which implies, on the one hand, willing to act in order to obtain a certain goal whilst, on the other hand, desiring that such a goal should not be realised: "A Man, whom I cannot deny, may oblige me to use persuasions to another, which at the same time I am speaking, I may wish not prevail on him. In this case, 'tis plain the *Will* and *Desire* run counter. I will the Action, that tends one way, whilst my desire tends another, and that the direct contrary" (§ 30).

(2) The second modification Locke brings to his moral psychology in the second edition onwards is that the idea of an absent good does not necessarily cause a desire and uneasiness for it: "absent good may be looked on, and considered without desire" (§ 31); "[…] they may have a clear view of good, great and confessed good, without being concerned for it, or moved by it" (§ 43). Furthermore, when we have the ideas of several goods, all of which we desire to a certain extent, and some of which we judge to be greater than others, it is not always the case that the respective strengths of our desires are proportionate to the comparative greatness of the desired

[7] Good and evil are primarily pleasure and pain; secondarily, good and evil are "*things* […] *that draw after them Pleasure and Pain*" (§ 61).

[8] "*Volition* is nothing, but that particular determination of the mind, whereby, barely by a thought, the mind endeavours to give rise, continuation, or stop to any Action, which it takes to be in its power" (§ 30).

[9] Also: "[…] the *will* or power of *Volition* is conversant about nothing, but our own Actions; terminates there; and reaches no farther" (§ 30).

goods. Although we judge a good *X* to be greater than a good *Y,* it may nevertheless happen that our desire for *Y* is stronger than our desire for *X:* "the *greater visible good* does not always raise Men's *desires* in proportion to the greatness, it appears, and is acknowledged to have" (§ 44). Of course, if we were always entirely rational, the comparative strengths of our desires would be proportionate to the comparative judged greatness of the goods. However, because we are sometimes less than entirely rational in practical matters, we have an obligation to strive to ensure, as far as possible, a fitness between strength of desire and judged greatness of good, just as in speculative matters we are under the rational obligation to see to it, as far as possible, that the degree of our assent to a probable proposition is proportionate to the degree of the available probabilities in favour of it all things considered.

(3) The third important addition Locke makes in the second edition is the theory of suspension of desire. Suppose one simultaneously has several desires and uneasinesses caused by ideas of different absent goods, some desires being stronger than others, and that one wishes to examine these ideas and to deliberate before acting. The point of deliberation is twofold: (a) to determine which presented good to pursue among others (which desire to try to satisfy); (b) if that is settled, to determine which type of action to perform in order to attain the chosen good. The latter deliberation optimally results in what Locke calls a "last judgement". Locke's theory of a last judgement is largely to be found in his correspondence with van Limborch, although traces of the doctrine are also present in II 21. A last judgement is a judgement "about the thing to be done" (CJL 7, 2979, 411), that is, about an action that one believes to be in one's power, and that one intends to perform right away. It is a practical evaluative judgement, the content of which has the general form: "this [type of action] is better for here and now" (CJL 7, 2979, 410).[10] Locke takes the expression "last judgement" literally. A last judgement always "immediately precedes Volition", so that a last judgement is last precisely because no further judgement is made between it and one's willing to act.[11] One of the implications of Locke's position is that, once a last judgement has been made, one is not free to will to perform any (type of) action different from the one aimed at in the judgement. As he explains to van Limborch, "liberty cannot consist in a power of determining an action of willing contrary to the judgement of the understanding because a man does not possess such a power". For, "an action of willing this or that always follows a judgement of the understanding by which a man judges this to be better for

[10] However, as Locke makes clear to van Limborch, a last judgement is not necessarily a "mature and right judgement"; it does not necessarily result from deliberation. For, "that judgement […] which is in reality the last judgement" is so "whether it has been well pondered and recast by mature deliberation, or is extemporaneous and sprung from a sudden impulse; and equally determines the will, whether or not it is in accordance with reason" (CJL 7, 2979, 411).

[11] Thus, there are three circumstances in which a last judgement can be made. It can be made without our suspending our desires in order to deliberate, and so without deliberating; it can be made after we have prematurely de-suspended our desires, that is, after we have interrupted our deliberation before its rational completion; or it can be made after we have de-suspended our desires and when our deliberation has achieved its rational conclusion.

here and now" (2979, 410). In other words, the volition that immediately follows a last judgement always conforms to it.[12]

Let us return to the suspension of desires and to the first part of the process of deliberation enabled by suspension, the part that determines which presented good to pursue among others (which desire to try to satisfy). If one's most powerful present desire and uneasiness determined one to will to act before the process of deliberation began, or before it were completed, the whole point of the process would be defeated, since one would not act according to the result of one's deliberation. Therefore, in order to initiate the process of deliberation and to pursue it to its rational conclusion, the agent must have some power to momentarily prevent her most powerful present desire and uneasiness from causing a volition to act. The suspension of desire, however, does not suppress or eliminate one's desires. During the period of their suspension, our desires remain, along with their attendant uneasinesses, although they will not remain unaltered as to their comparative strengths if we conduct our deliberation to its conclusion. What is momentarily suspended, strictly speaking, is a desire causing a volition to act. Our power of suspension, of course, is empirically limited because some uneasinesses are overwhelming. A man being tortured cannot suspend his desire to be relieved of his present pain; he is not able to momentarily prevent that desire from causing him to will to do something in order to avoid further pain. However, under less extreme circumstances, without the power to suspend one's desires, the attempt to examine one's ideas of absent goods and to deliberate before trying to act would be pointless. This is why Locke repeats that it is not inevitably the case that the most powerful uneasiness that one has at a certain moment determines one to will to act at that moment; it does so only "ordinarily", "for the most part", that is, when one does not suspend one's desires in order to deliberate, whatever the reason for not deliberating may be (Cf., for example, § 40):

> […] it is natural […] that the greatest, and most pressing [uneasiness] should determine the *will* to the next action; and so it does for the most part, but not always. For the mind having in most cases, as is evident in Experience, a power to *suspend* the execution and satisfaction of any of its desires, and so all, one after another, is at liberty to consider the objects of them; examine them on all sides, and weigh them with others. In this lies the liberty Man has; and from not using it right […] we precipitate the determination of our *wills*, and engage too soon before due *Examination*. To prevent this we have a power to *suspend* the prosecution of this or that desire, as every one daily may Experiment in himself. This seems to me to be the source of all liberty; in this seems to consist that, which is (I think improperly) call'd *Free will.* (§ 47)

Clearly, Locke refuses to call the kind of freedom discussed here "free will", although he acknowledges that others improperly call it so. And one can well understand why

[12] Thus, a volition in Locke is determined both by an uneasiness and by a last judgement. I will not here go into an explanation of how this is possible. The strategy I develop elsewhere is to show that an uneasiness and a last judgement determine a volition in two different, yet complementary respects. The uneasiness determines a volition in the sense of motivating it; the last judgement determines a volition by way of fixing its content to a certain type of bodily movement or act of thinking to be performed here and now (cf. Glauser 2003).

he refuses. For what the power to suspend one's desires enables is the effective use of one's power to freely deliberate. Locke's point is that it is freedom to think, not freedom to will, that is enabled by the suspension of desire.

As we have seen, according to Locke, it is only "ordinarily" or "for the most part" that one's present strongest desire determines one to will to act in order to satisfy that desire. But what does this mean exactly? Does it mean, for instance, that one can see to it that one of one's present weaker desires determines a volition to act? Does it mean, in other words, that one can freely will to act in order to satisfy a present weaker desire whilst also having stronger desires at the same time?

I propose a negative reply. In order to see why, let us ask: When is it *not* the case that one's strongest present desire determines one to will to act accordingly? The only case Locke mentions is when we suspend our desires in order to deliberate, as is clear from § 47 quoted above.[13] This strongly suggests that as long as we do not suspend our desires—or, if we do, as soon as we de-suspend them—the strongest uneasiness of desire determines a volition to act in order to satisfy that desire. It is *only if and whilst* we suspend our desires that the strongest uneasiness of desire does not determine a volition.

In fact, so much is only to be expected, for, as we shall see in the next section, the whole point of suspending our desires in order to deliberate before acting—about which of our desires to satisfy—is to try to make the respective strengths of our desires proportionate to the comparative judged greatness of the goods considered. That is to say, we try to see to it by deliberating that the goods we judge greater become the objects of stronger desires, whilst the goods we judge lesser become the objects of weaker desires. This implies that (we believe that) once we de-suspend our desires the strongest desire will prevail; it will determine a volition to act in order to satisfy that desire. Otherwise, why should we be concerned to deliberate in order to heighten our desires for absent greater goods, and to weaken our desires for lesser present goods? In sum, the whole point of suspending our desires and of deliberating is to try to ensure that, once we have completed our deliberation and de-suspended our desires, the strongest desire we end up with will be the desire for the good we judge greatest. Locke says as much in an admittedly abbreviated manner:

> And thus, by a due consideration and examining any good proposed, it is in our power, to raise our desires, in a due proportion to the value of that good, whereby in its turn, and place, it may come to work upon the *will*, and be pursued. (§ 46)
> Here a Man may suspend the act of his choice from being determined for or against the thing proposed till he has examined, whether it be really of a nature in it self and consequences to make him happy, or no. For when he has once chosen it, and thereby it is become a part of his Happiness it raises desire, and that proportionably gives him *uneasiness*, which

[13] This question should not be confused with another question, namely: When is a volition not determined by an uneasiness? There is only one case were a volition is not determined by an uneasiness and that is when we will to continue an action. In such a case "The motive, for continuing in the same State or Action, is only the present satisfaction in it; The motive to change, is always some uneasiness: nothing setting us upon the change of State, or upon any new Action, but some uneasiness" (§ 29).

> determines his *will*, and sets him at work in pursuit of his choice on all occasions that offer. (§ 56)[14]

Strictly speaking, therefore, it turns out that: (1) A volition is always causally determined by our strongest desire except when it is in our power to suspend our desires momentarily in order to deliberate, during which process there is no volition; (2) a volition, when it occurs, *always* aims to contribute to satisfy our present strongest desire. What suspension of desire affords is the possibility for us to employ freedom of thinking in order to modify, in some limited measure, the comparative strengths of our present desires so as to ensure that the desire we judge should be the strongest becomes the strongest. At no point in Locke's account is there any possibility of willing to act in order to satisfy a comparatively weaker present desire among stronger ones.

32.2 Locke's Discussion of Ovid's Phenomenon

Because willing to act is always determined by a last judgement and by the uneasiness of the strongest desire (when we do not suspend our desires, or after we have de-suspended them), Locke rules out the possibility of what Alfred Mele calls a strict incontinent action, which Mele defines thus:

> An action *A* is a *strict incontinent action* if and only if it is performed intentionally and freely and, at the time at which it is performed, its agent consciously holds a judgement to the effect that there is good and sufficient reason for his not performing an *A* at that time. (Mele 1987, p. 7)

In Mele's definition, judgement and action are roughly simultaneous ("at the time at which it is performed…"), so Mele's judgement corresponds to a Lockean last judgement. And the content of Mele's judgement "there is good and sufficient reason for […] not performing an A (now)" would be phrased in a Lockean last judgement as "refraining from doing *A* is better for here and now". Because a Lockean last judgement immediately determines a volition, the volition would be to refrain from doing *A* now, which is incompatible with Mele's definition of a strict incontinent action. Locke's internalist conception of the relation between last judgement and volition shows that the kind of akrasia he envisages is not the sort picked out by Mele.

Also, it is situated elsewhere. The main point of Locke's account of Ovid's phenomenon lies in the lack of fitness between the judged greatness of goods and the

[14] "For, since the will supposes knowledge to guide its choice, all that we can do, is to hold our wills undetermined, till we have examin'd the good and evil of what we desire. What follows after that, follows in a chain of Consequences linked one to another, all depending on the last determination of the Judgment, which whether it shall be upon an hasty and precipitate view, or upon a due and mature Examination, is in our power" (§ 52). "The result of our judgment upon that Examination is what ultimately determines the Man, who could not be free if his will were determin'd by any thing, but his own desire guided by his own Judgement" (§ 71).

strengths of the desires for those goods. This is a discrepancy between our judgement regarding goods and our desire for them, not between last judgement (regarding an action) and volition.

In order to situate Locke's position more precisely, it is useful to see how it fares with Davidson's understanding of the problem of akrasia. Davidson defines an incontinent action in the following way:

> D. In doing *x* an agent acts incontinently if and only if: (a) the agent does *x* intentionally; (b) the agent believes there is an alternative action *y* open to him; and (c) the agent judges that, *all things considered*, it would be better to do *y* than to do *x*. (Davidson 1989, p. 22, my italics)

The difficulty in understanding the possibility of such an action arises because it seems to be incompatible with the conjunction of two plausible claims:

> P1. If an agent wants to do *x* more than he wants to do *y* and he believes himself free to do either *x* or *y*, then he will intentionally do *x* if he does either *x* or *y* intentionally.
> P2. If an agent judges that it would be better to do *x* than to do *y*, then he wants to do *x* more than he wants to do *y*. (Davidson 1989, p. 23)

Let us reformulate P1 and P2 in Locke's vocabulary, keeping in mind his distinction between desire and volition:

> P1* If an agent desires to attain a good *x* more than he desires to attain a good *y*, and he believes himself free either to do an action A in order to satisfy his desire for *x* or an action B in order to satisfy his desire for *y*, then he will voluntarily do A if he does either A or B voluntarily.
> P2* If an agent judges that *x* is a greater good than *y*, then he desires to attain *x* more than to attain *y*.[15]

As we have seen, Locke does not accept P1* unconditionally. For Locke, P1* obtains only if the agent does not suspend his desires, or after he has de-suspended them. If and whilst he suspends them, it is not the case that his present strongest desire determines a volition to act in order to satisfy that desire.

Next, it should be noted that in P2* the judgement is not a Lockean last judgement, because it is not about an action to be performed now, but about a good to be attained by acting in a certain way. According to Vailati (1990, p. 214), Locke refuses P2. It is preferable to say that he refuses P2*. Because Locke rejects P2*, his version of weakness of the will is made possible, as we have seen, by an occasional discrepancy between the judged greatness of goods and the strengths of the desires for those goods. We may judge *X* to be greater than *Y* and yet desire *Y* more than *X,* or not even desire *X* at all.

[15] There are two reasons for which we cannot rephrase P2 by saying "If an agent makes the last judgement that it is better to do *x* than *y* here and now, then he wills to do *x* more than he wills to do *y* here and now". First, because, according to Locke one can have only one volition at a time, "we being capable but of one determination of the will to one action at once" (§ 36). Second, for Locke volitions do not admit of degrees, contrary to desires; one cannot will more or less to do something, but one can desire to attain one good more than one desires to attain another. This is why Davidson's use of "wanting" in P2 must be translated as "desiring" in P2*.

It is important to notice, too, that the kind of akrasia Locke considers is a discrepancy between the strength of our desires and our *judgement* about the greatness of certain goods. It is not necessarily a discrepancy between the strength of our desires and the objective greatness of the goods themselves. To make this clearer, suppose that *X* is in fact a greater good than *Y,* and that one judges falsely that *Y* is a greater good than *X,* but that one nevertheless desires *X* more than *Y*. In such a case, our desires just luckily happen to be proportionate to the goods considered. Yet, this chance fitness does not manifest the rational fitness Locke holds we are under the obligation to aim for, because the chance fitness is based on an unknown mistake in judgement, that is, both on error and ignorance. True, when discussing Ovid's phenomenon, Locke concentrates on true judgements[16]; he does not explicitly consider a case of discrepancy between desire and false judgement. Yet, if he were to, I submit he would consider it a case of akrasia in his sense. If so, akrasia as understood by Locke occurs when our desires are inadequate to our judgement about goods, whether the judgement be true or false.

At this point, two questions arise. (A) What causes such a discrepancy? (B) How can it be either avoided or remedied? Let us discuss both questions successively. As regards the first question (A), it is important to distinguish two aspects of the discrepancy. For, on the one hand, (A1) some desires are too weak, or even non-existent, whereas, on the other hand, (A2) other desires are too strong, with respect to the judged greatness of goods.

32.2.1 (A1). Desires Too Weak

According to Locke, we are generally concerned both with (a) relief from our present misery, which consists in all the present pains we endure, and with (b) attaining happiness, which consists in all the pleasures or positive goods we are capable of, including eternal salvation. "*Happiness* […] in its full extent is the utmost Pleasure we are capable of, and *Misery* the utmost Pain: And the lowest degree of what can be called *Happiness*, is so much ease from all Pain, and so much present Pleasure, as without which any one cannot be content" (II 21 § 42).[17] However, there is an asymmetry between pleasure and relief from pain. Whereas complete relief from

[16] For instance: "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" (§ 35). In the following passages, it is clear that the judgement that something is a good, or a greater good than something else, is taken to be true: "till he feels an uneasiness in the want of it, his will will not be determin'd to any action in pursuit of this confessed greater good" (§ 35); "'Tis not for want of viewing the greater good: for he sees, and acknowledges it" (§ 35); "all good, even seen, and confessed to be so, does not necessarily move every particular man's desire" (§ 43); "they may have a clear view of good, great and confessed good, without being concern'd for it, or moved by it" (§ 43); "the greater visible good does not always raise Men's desires in proportion to the greatness, it appears, and is acknowledged to have" (§ 44).

[17] "So the greatest Happiness consists, in the having those things, which produce the greatest Pleasure; and in the absence of those, which cause any disturbance, any pain" (§ 55).

pain is mere contentedness and can be achieved without enjoying many pleasures, the enjoyment of pleasure (and happiness) depends on and implies relief from pain.

It is therefore important to distinguish two sorts of absent goods—relief from present pain and positive good—and, correspondingly, two sorts of uneasiness. First, there is the uneasiness that is identical to a present pain, and this is always equal to the desire to be rid of the pain: "All pain of the body, of what sort soever [sic], and disquiet of the mind, is *uneasiness*: And with this is always join'd Desire, equal to the pain or *uneasiness* felt" (§ 31). In other words, the strength of the desire to be rid of a pain is always equal to the greatness of the pain. "For *desire* being nothing but an *uneasiness* in the want of an absent good, in reference to any pain felt, ease is that absent good; and till that be attained, we may call it *desire*, no body feeling pain, that he wishes not to be eased of, with a desire equal to that pain, and inseparable from it" (§ 31). Now, relief from a pain is an absent good called "ease" (albeit not a positive good because it is not the same thing as a pleasure). Yet, the importance of a desired ease is always relative to the greatness of the pain we desire to be relieved of. Hence, there is no disproportion between the strength of our desires for ease and the importance of such absent goods. Akrasia, therefore, does not concern desire for relief from present pain, but only desire for positive goods.

Nor does it concern desire to continue to enjoy present pleasure. At least, if we consider present pleasures in abstraction from their consequences, our desires to continue to enjoy them are always equal to the greatness of these goods:

> Things in their present enjoyment are what they seem; the apparent and real good are, in this case, always the same. For the Pain or Pleasure being just so great, and no greater, than it is felt, the present Good or Evil is really so much as it appears. And therefore were every Action of ours concluded within it self, and drew no Consequences after it, we should undoubtedly never err in our choice of good; we should always infallibly prefer the best. (II 21 § 58)[18]

Therefore, the occasional discrepancy between the strengths of our desires on the one hand and the greatness of absent goods on the other hand concerns only goods that are *both* positive and absent. Why? Because the absence of an *acknowledged* absent *positive* good does not necessarily cause a pain. So, even if we judge that a certain absent positive good *X* is greater than *Y,* it may be that we have little or no desire for *X* when its absence causes no pain and uneasiness:

> As much as we desire any absent good, so much are we in pain for it. But here all absent good does not, according to the greatness it has, or is acknowledg'd to have, cause pain equal to that greatness; as all pain causes desire equal to it self: Because the absence of good is not always a pain, as the presence of pain is. And therefore absent good may be looked on, and considered without *desire.* (§ 31; cf. § 36)

There is a good reason for which this is the case, for if every absent positive good we conceive caused a pain, "we should be constantly and infinitely miserable; there being infinite degrees of happiness, which are not in our possession" (§ 44).

[18] In the last lines of the quotation "choice" and "prefer" refer to desires, for they aim respectively at the "good" and the "best". Also: "Therefore, as to present Pleasure and Pain, the Mind, as has been said, never mistakes that which is really good or evil; that, which is the greater Pleasure, or the greater Pain, is really just as it appears" (§ 63).

Thus, two factors contribute to explain why we are naturally led to have some desires for absent positive goods that are too weak in comparison with the acknowledged greatness of those goods. First, because happiness depends on relief from the numerous present pains that assail us relating to the "ordinary necessities of our lives"—such as "the *uneasiness* of *Hunger, Thirst, Heat, Cold, Weariness* with labour and *Sleepiness* in their constant returns, *etc*". (§ 45)—our general desire to be rid of such pains occupies the greater part of our time and efforts and takes precedence over our general desire to attain great acknowledged absent positive goods.[19]

Second, we correctly judge that desiring all the positive absent goods it may be possible to pursue would only increase our present misery by raising more uneasiness. Because of these two factors, we tend to be content with the mere removal of present pain and with the enjoyment of the scant positive goods we can easily obtain in the near future: "All *uneasiness* therefore being removed, a moderate portion of good serves at present to content Men; and some few degrees of Pleasure in a succession of ordinary Enjoyments make up a happiness, wherein they can be satisfied" (II 21 § 44).[20]

The two factors explain why we can have disproportionately weak desires, or even no desire at all, for acknowledged great positive absent goods.[21] What is striking in this account, though, is that the reasons invoked by Locke have nothing to do with Molyneux's conception of "depravity of the will", nor even with any deep practical irrationality. On the contrary, given the hard conditions and constraints bearing on our daily subsistence, both factors in Locke's explanation seem to make the discrepancy between judgement about, and desire for, absent positive goods quite rational and thus, to some extent, hardly avoidable.

[19] "Because, as has been said, the first step in our endeavours after happiness being to get wholly out of the confines of misery, and to feel no part of it, the will can be at leisure for nothing else, till every uneasiness we feel be perfectly removed, which in the multitude of wants, and desires, we are beset with in this imperfect State, we are not like to be ever freed from in this World" (§ 46); cf. also § 36, § 57, and § 64.

[20] "Convince a Man never so much, that plenty has its advantages over poverty; make him see and own, that the handsome conveniencies 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 determin'd to any action, that shall bring him out of it" (§ 35). "For in this narrow scantling of capacity, which we are accustomed to, and sensible of here, wherein we enjoy but one pleasure at once, which, when all uneasiness is away, is, while it lasts, sufficient to think our selves happy, 'tis not all remote, and even apparent good, that affects us. Because the indolency and enjoyment we have, sufficing for our present Happiness, we desire not to venture the change: Since we judge that we are happy already, being content, and that is enough" (§ 59).

[21] This is why "The Idea of it [a positive absent good] indeed may be in the mind, and view'd as present there: but nothing will be in the mind as a present good, able to counter-balance the removal of any uneasiness, which we are under, till it raises our desire, and the uneasiness of that has the prevalency in determining the will. Till then the Idea in the mind of whatever good, is there only like other Ideas, the object of bare unactive speculation" (§ 37).

32.2.2 (A2). Desires Too Strong

There are at least two reasons for our having disproportionately great desires for acknowledged small goods. First, there is the pervasive influence of our passions. Their influence in this respect is due to the fact that desire and uneasiness accompany, or are part of, most passions.[22] Second, there are what Locke calls "fantastical *uneasiness*, (as itch after *Honour, Power*, or *Riches*, etc.) which acquir'd habits by Fashion, Example, and Education have setled [sic] in us, and a thousand other irregular desires, which custom has made natural to us" (§ 45). Both passionate and "irregular" desires tend to be disproportionately strong in comparison with the judged greatness of the absent positive goods they aim at.

Are there more factors, according to Locke, than just these two? It is hard to say. In § 56, he addresses the issue "*How men come often to prefer the worse to the better*", and he gives a detailed reply in §§ 57–70. One might have expected Locke, in these paragraphs, to be pursuing his previous discussion of the discrepancy between our desires and our (presumably true) judgements about absent goods (as in §§ 35 and 43). But this is not the case. For in §§ 57–70 he seeks to prove that we prefer the worse to the better because of *wrong* judgements about the absent positive goods considered. Thus, instead of pursuing the question of the discrepancy between the strength of desires for absent positive goods and judgements about the value of such goods, Locke now addresses the altogether different question of the discrepancy between our desires and *the absent goods themselves*. And he answers the latter question by showing that in such a case our desires are determined by, and therefore adequate to, mistaken judgements. We will not look at the reasons Locke gives for our false judgements, but here is an example. He identifies an illusion common to sight and to moral psychology. Just as bodies seen close up may seem larger than those viewed at a distance, positive absent goods which we believe may be attained easily in the near future *seem* greater than those which we believe require more efforts and time to be attained, and often a lesser probability of success:

> […] *when we compare present Pleasure or Pain with future*, (which is usually the case in the most important determinations of the Will) *we often make wrong Judgments* of them, taking our measures of them in different positions of distance. Objects, near our view, are apt to be thought greater, than those of a larger size, that are more remote: And so it is with Pleasures and Pains, the present is apt to carry it, and those at a distance have the disadvantage in the Comparison. (§ 63)

This confirms that Locke retains an important intellectualist streak even in the second and subsequent editions of the *Essay*. For, inasmuch as the discrepancy between the respective strengths of our desires and the respective greatness of the goods considered is to be explained by wrong judgements, it is assumed that the desires that are disproportionate to the goods are determined by—and adequate to—

[22] "But yet we are not to look upon the uneasiness which makes up, or at least accompanies most of the other Passions, as wholly excluded in the case. Aversion, Fear, Anger, Envy, Shame, etc. have each their uneasiness too, and thereby influence the will. […] Nay there is, I think, scarce any of the Passions to be found without desire join'd with it" (§ 39).

false judgements regarding the goods. Indeed, speaking of such false judgements, he says: "Other *uneasinesses* arise from our desires of absent good; which desires always bear proportion to, and depend on the judgment we make, and the relish we have of any absent good; in both which we are apt to be variously misled, and that by our own fault" (§ 57).

32.2.3 (B). Avoiding and Overcoming Akrasia

Let us return to akrasia. How does Locke think it can be either avoided or overcome? His explanation focuses not on desires that are too strong, but on those that are too weak, one of the basic reasons for this being that he wants to account for the fact that persons tend to be insufficiently concerned for their salvation (cf. §§ 60 and 70). In such a case, according to Locke, we have not made the absent good considered "a necessary part of our happiness":

> […] all good, even seen, and confessed to be so, does not necessarily move every particular man's *desire*; but only that part, or so much of it, as is consider'd, and taken to make a ecessary part of his happiness. All other good however great in reality, or appearance, excites not a Man's *desires*, who looks not on it to make a part of that happiness, wherewith he, in his present thoughts, can satisfie [sic] himself. (§ 43)

But how, exactly, does one make some good a part of one's happiness? We know what the effect of such an endeavour is: It is raising the strength of a desire so as to make it appropriate to the greatness of the judged absent good: "Men may and should correct their palates, and give a relish to what either has, or they suppose has none" (§ 69). So, how do we produce such an effect?

Locke gives two answers. One is cognitive, the other is practical: "A due consideration will do it in some cases; and practice, application, and custom in most" (§ 69). Let us set aside the practical aspect ("practice, application, and custom") and consider the cognitive aspect: "due consideration". This echoes a previous passage: "And thus, by a due consideration and examining any good proposed, it is in our power, to raise our desires, in a due proportion to the value of that good" (§ 46). This is only one in a long series of passages where Locke holds that, with the help of our power to suspend our desires (cf. §§ 47 and 56), we can raise them to some extent merely by deliberating and judging better than we previously did.[23] What does this mean? It cannot mean that by more deliberation and rational examination we *correct* our previous judgements about the respective greatness of goods, since those judgments are supposed to be true. Indeed, in Locke's words, we are taking

[23] For instance: "absent good, though thought on, confessed, and appearing to be good, not making any part of this unhappiness in its absence, is jostled out […] till due, and repeated Contemplation has brought it nearer to our Mind, given some relish of it, and raised in us some desire" (§ 45); "we should take pains to suit the relish of our Minds to the true intrinsick good or ill, that is in things; and not permit an allow'd or supposed possible great and weighty good to slip out of our thoughts, without leaving any relish, any desire of it self there, till, by a due consideration of its true worth, we have formed appetites in our Minds suitable to it" (§ 53).

about goods "seen, and confessed to be so". Therefore, it can only mean that by further deliberation and rational examination, we *learn* something new: We discover a probability we had not previously taken into account, the probability that a certain absent positive good is "a part of our happiness":

> we do not fix our desires on every apparent greater good, unless it be judged to be necessary to our happiness: if we think we can be happy without it, it moves us not. This is another occasion to Men of *judging wrong*, when they take not that to be necessary to their Happiness, which really is so. (§ 68)

In other words, it is one thing to judge a certain good to be very great, it is quite another to judge that good to be a necessary part of our happiness.[24] By coming to make the second judgement, we come to learn something not expressed by the first. Thus, if a desire for a great absent positive good is inappropriately weak with regard to the first (presumably true) judgement about that good, it is in our power, according to Locke, to make the desire appropriate by heightening it. This can be accomplished by further rational deliberation just in case our deliberation reaches the conclusion expressed by the second judgement: that the good is conducive to—or constitutive of—our happiness.

There is, however, a difficulty to be addressed. As we saw above, when Locke explains why the strength of our desires may be disproportionate to the greatness of goods, he presupposes that the disproportionate desires are appropriate to the false judgements we make of the goods. Yet, as we have also seen, the strength of our desires is not necessarily appropriate to the (presumably true) judgements we make concerning the greatness of goods. The difficulty can readily be solved. What Locke wants to say is that when a false judgement about the greatness of a good is accompanied by a judgement that such a good is necessary to our happiness, then the two judgements together determine a desire which is appropriate to the first judgement, a desire whose strength is proportionate to the greatness of the good *as (mistakenly) judged*. But, when a true judgement about the greatness of a good is *not* accompanied by a judgement that the good is necessary to our happiness, then the desire for the good may be inappropriate to the (first and only) judgement because the strength of the desire may not be proportionate to the greatness of the good *as (truly) judged*.

32.3 Conclusion

Two connected points must be made in conclusion. The first concerns Locke's conception of akrasia. According to Locke, Ovid's phenomenon is important, not only for reasons pertaining to his ideal of human rationality, but also because our salvation may depend on avoiding or overcoming it. Yet, it seems to involve no deep

[24] "'Tis our opinion of such a necessity [the necessity of a certain good to "the making or increase of our Happiness"] that gives it its attraction: without that we are not moved to any absent good" (§ 59); "Their aptness therefore to conclude, that they can be happy without it, is one great occasion, that Men often are not raised to the desire of the greatest absent good" (§ 60).

psychological irrationality. First, as we have seen, Locke rejects the possibility of what Mele calls a strict incontinent action. Second, Locke seems to believe that the discrepancy between the strength of our desires and our (presumably true) judgements concerning the greatness of absent positive goods occurs when we do not suspend our desires in order to deliberate and think more carefully, or when we prematurely interrupt the process. Completing the process calls for the recognition that a certain judged great good is part of our happiness. Locke does not talk about such a discrepancy remaining *after* deliberation has come to its full rational conclusion. This implies that when we are victims of akrasia, the judgements to which our desires are inappropriate are not "all-things-considered" judgements. They cannot be, since our desires can be heightened by better judgement and by understanding that the goods in question are part of the happiness we desire.

This is not to say that akratic *action* is ruled out by Locke. On the contrary, it turns out that:

> S does *B* akratically if:
> (i) S judges that *X* is a greater good than *Y*
> (ii) S desires *Y* more than *X*
> (iii) S judges that S can do either *A* in order to attain *X,* or *B* in order to attain *Y*
> (iv) either S does not suspend S's desires in order to deliberate, or S does so but interrupts her deliberation before its rational conclusion, and therefore S continues to desire *Y* more than *X* (therefore S's desire and uneasiness for *Y,* along with S's last judgement about what is to be done here and now, determine S to will to do *B*)
> (v) S does *B*

In such a case, S acts contrary to S's judgement about the respective greatness of goods *X* and *Y*. However, as long as the judgement that *X* is a greater good than *Y* is not an "all-things-considered" judgement, Locke's conception of akrasia seems to be a relatively mild affair. However, this is somewhat a question of perspective. If Locke's conception of akrasia seems mild, involving no deep irrationality, it is partly because of his high normative requirements concerning rationality, both epistemic and practical, along with his belief in the possibility of our satisfying them to some extent. This leads us to the next point, concerning intellectualism.

The second concluding remark is that in the second and subsequent editions of the *Essay,* Locke is far from entirely renouncing intellectualism.[25] True, in any case, our being possessed of our most general desire, the desire for happiness, is not determined by our evaluative judgements, but seems to be entirely natural, although we are often in doubt as to what happiness consists in. Furthermore, as of the second edition, evaluative judgements about goods no longer directly determine volitions. Locke's amended moral psychology now makes the connection between judgement about goods and volition both indirect and weaker by introducing the intermediate role of desires and uneasiness, as distinct from volitions, and also the power to suspend desires in order to deliberate before willing to act. Nevertheless, important aspects of intellectualism remain. For example, (1) disproportionately weak and strong desires are determined by false judgements about the greatness of

[25] This point has been made by Chappell (1994); however, our arguments differ.

certain goods, accompanied by the judgement that the goods, as judged, are necessary to our happiness. The ensuing desires may be disproportionate to the goods, but they are appropriate to the judgements. (2) Whilst we suspend our desires, it is in our power, if we pursue our deliberation to its full conclusion, to heighten an inappropriately weak desire by deliberating more and judging better, so that the new (hopefully true) judgements about an acknowledged great good made during suspension—including the judgement that the good is a necessary part of our happiness—determine a desire that is appropriate to the judgement about the greatness of the good, and thus, proportionate to the greatness of the good. (3) If this happens, after we de-suspend our desires, the strongest desire, with its attendant uneasiness, determines a volition. In such a case, our new judgements about a certain good indirectly determine a volition by directly heightening a desire and uneasiness for a greater good acknowledged to be part of our happiness. (4) In all cases, though, volitions are directly determined, not only by uneasiness, but also by *last* judgements, which are not directly about goods, but about what is to be done here and now in order to attain them.

Aspects of intellectualism are retained in the four points just mentioned. They go a long way to explain why Locke's conception of weakness of the will is comparatively mild.

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Chapter 33
Bergson, Truth-making, and the Retrograde Movement of the True

Daniel Schulthess

Abstract Henri Bergson (1859–1941) was one of the main exponents of evolutionary thinking in the latter nineteenth and early twentieth century. He gave that kind of thinking an unprecedented metaphysical turn. In consequence of his versatility, he also encountered the notion of truth-making, which he connected with his ever-present concerns about time and duration. Eager to stress the dimension of radical change and of novelty in the nature of things, he rejected (in one form) what he called "the retrograde movement of the true" while championing it—with undeniable delight in the air of paradox—in a derivative form. In this chapter, I explain what "the retrograde movement of the true" consists of—in its two forms.

Keywords Truth-makers · Time · Present · Modality · Change

33.1 Introduction

We may have different levels of expectation relative to an account of truth-making. Many things may vary: the questions to be addressed, the distinctions to be made, the logical aspects to be taken care of, and the kind of dialectic to be engaged in. A minimal notion of what an account of truth-making should consist of may include the following elements:

1. The explicit identification of truth-bearers
2. The correlative identification of "that in virtue of which" a given true truth-bearer is true; i.e., of the relevant truth-makers
3. The idea of a specific, asymmetric, noncausal relation, between a truth-maker and the correlative true truth-bearer: with the phrase "that in virtue of which", this idea is already implicit in the preceding clause

Furthermore, an account of truth-making may either have the aim of articulating a formal theory of truth—the theory being an end it itself—or it may do some work in addressing other issues. A comparison can be made with ethics, where we find,

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as distinctive areas of inquiry, ethical theory on the one hand and applied ethics on the other.

In an author like Henri Bergson, we discover an account of truth-making to the extent that our requirements remain minimal, technically speaking; and that we accept that the account stays embedded in the treatment of questions which go beyond the formal theory of truth.

This is not to say that we should forget about an account such as Bergson's; and this for two main reasons: (i) On the side of the theory of truth-making, we may benefit from extending its thematic spectrum to such an author, even quite radical, because of the wealth of interesting investigations which his writings contain. Bergson's case study in truth-making will provide an original material, able to enrich other, more focused accounts. (ii) If we take the side of the understanding of Bergson, it is obvious that we have to articulate certain of his preoccupations in terms of an account of truth-making. They cry out for such a treatment. As we shall see, Bergson does not belong properly, given his views on truth-making, to the context of pragmatism, to which no doubt he was close in some respects (see Chap. 7, "On William James' Pragmatism: Truth and Reality" in his 1959a). What he has to say about truth requires the rejection of the antirealism otherwise characteristic of pragmatism.

One last introductory consideration: Bergson, given his philosophical predilections, addresses most issues from a concern for the role of time and duration. This is true also with the present topic. At an earlier stage, accounts of truth-making did little to interfere with views on the metaphysics of time; but this has changed significantly. But following Armstrong's chapter on time in his 2004 (Chap. 11), we have seen a growing interference between accounts of truth-making and the metaphysics of time. So the obstacles to the idea of addressing the views of Bergson concerning truth-making can be overcome.[1]

33.2 A Minimal Account

What Bergson has to say, as far as his account of truth-making is concerned, belongs principally to the first and third chapters of his collection of articles of 1934,[2] respectively: "The Retrograde Movement of the True" ("Le mouvement rétrograde du vrai") and "The Possible and the Actual" ("Le possible et le réel"). The title "The Retrograde Movement of the True" is slightly odd, because this retrograde movement is something which Bergson precisely *rejects* in its primitive form (though he accepts it in a derivative form). We may say that according to him there is a *problem*

[1] My interest in the topic of this chapter originated with a mention of Bergson's view on "retrogradation of truth" by Vuillemin (1996, p. 148–149).

[2] Ironically enough, the main treatment of these questions was elaborated by Bergson for his English lectures at Columbia University (New York) in 1913 (see Bergson 1959a, p. 1264, note 1). The lectures have not been recovered to this day.

of the retrograde movement of the true, and that his analysis of this problem leads him to the conclusion that in primitive form there is no such thing as the retrograde movement of the true.

Now the problem is couched in terms that depend on an account of truth-making—minimal as it may well be. So let me first say a few words about the three basic issues listed at the beginning of this chapter.

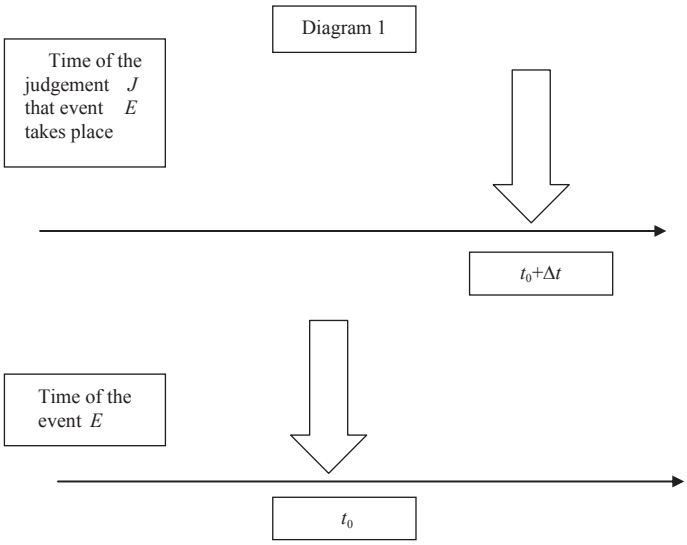
Truth-bearers Bergson's truth-bearers are basically judgements, dated acts of judgement; they have an inner structure, given that they contain terms. Otherwise, Bergson gives no specific account of judgement content. He moves without much ado from the act of judging as a token, to the judgement as a type; and from there to the judgement as an ideal content (1959a, p. 1263).

Truth-makers Bergson's account here is not fine-grained either; the truth-maker is "the occurrence (*apparition*) of a thing or of an event", which the judgement "records" (1959a, p. 1263).

The relation Bergson writes very little about this relation: "the judgement, which records the occurrence of a thing or of an event, can come only after them" (1959a, p. 1263). The phrase "can only come after them" jointly conveys the temporal aspect of succession and the ontological aspect of asymmetric dependence.

33.3 The Canonical View of Judgement

Bergson basically addresses only one type of judgment: singular, historical, contingent judgement. And, we may add, *affirmative* judgement. Once an event has taken place, its occurrence can then be stated, it can be recorded by the judgement. Thus, the formation of a given truth-bearer is posterior to the relevant truth-maker. For Bergson, the lesson is this: there is basically an insertion in time for any historical judgement: "[the judgment] thus has its date" (1959a, p. 1263). When he writes this, he speaks of the date of the judgement—as an act. This date indicates the time of the very existence of the true judgement. It does not overlap with the date of the event (which features in the judgement-content, locating the event in time). Indeed, what is at stake is not the time of the truth of a truth-bearer either (in the sense in which a tensed judgement may first be false and then become true at a time). Here the truth-bearer is not exposed to truth-value changes, because the content includes a date. So overall in a correct account of truth-bearers, we must take heed of two dates: the usual date which indicates the temporal location of the event and another date which determines the time at which the judgement is formed. This time is dependent on the date of the relevant event, and is slightly posterior to it. This has the following structure (Diagram 33.1):



We may conclude that according to Bergson, a judgement in canonical form (CF) has to be given in the following way:

(CF) At $t_0+\Delta t$ there is the true judgement J that the event E takes place at t_0.

This is the legitimate structure concerning judgement; it applies as such to historical judgements. Now we wish to express the dependence of such a formula (CF) on the realization of the event (DE for "dependence"):

(DE) If at $t_0+\Delta t$ there is the true judgement J that the event E takes place at t_0, then E takes place at t_0.

An additional condition must be provisionally taken into account; namely, that the event has been observed (DEO for "dependence" and "observation"). (We come back to this later.)

(DEO) if at $t_0+\Delta t$ there is the true judgement J that the event E takes place at t_0, then (E takes place at t_0, and E gets observed at t_0).

All of this is unproblematic to Bergson, or to anybody else.

33.4 The Retrograde Movement of the True: How It Works

Now I come closer to the properly Bergsonian topic of the retrograde movement of the true. In order for the retrogradation to take place, a first step is needed. The "observation clause"—the requirement for an actual observation to have taken place—has

to be lifted from (DEO), and replaced with a "*de jure* conditional" (DJ, for de jure, *en droit*). Bergson describes this in the following way: "The true judgement may well have been left unformulated: it did set itself *de jure,* before it was factually set out" (1959a, p. 1263). Presumably, the idea is that in itself the actual observation makes no real difference to the proceedings. The suppression of the clause concerning actual observation also allows us to treat the occurrence of the event as sufficient for the correlative "virtual" judgement.

(DJ) If the event E takes place at t_0, then at $t_0+\Delta t$ there is de jure the true judgement J that E takes place at t_0.

As far as I can see, Bergson does not object to this specific step, which leaves the time constraints intact. Given that he does not insist on actual observations, obviously he is not a verificationist. The kind of ontology of judgement and terms he stands for remains in need of a thorough investigation.

Now comes the decisive step. The view prevails in common thinking that the first date featuring in the CF can be suppressed. Bergson writes: "To every true [judgement] […] we impress a retrograde movement" (1959a, p. 1263). Elsewhere he comments: "[Modern philosophers] make of truth something which is anterior to the well-determined act of formulating it for the first time" (1959a, p. 1446; see also p. 1445).

On account of this step, we switch, from a dated view given by (CF) above, to an omnitemporal view of judgement (OV for "omnitemporal view").

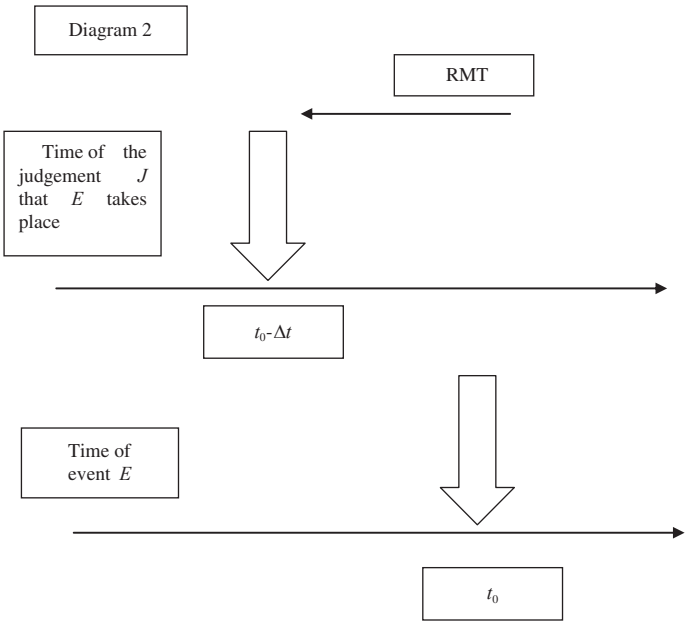
(OV) If at time t there is the true judgement J, then at all times there is the true judgement J.

This principle (OV) comes into application from the use of our understanding (*intelligence*). Bergson writes: "This date [which attaches the existence of the truth-bearer to a particular time] gets immediately erased, in virtue of the principle, which is rooted in our understanding, that every truth is eternal" (1959a, p. 1263). In Bergson, human understanding has to do with action: "understanding is well fitted to deal with material things" (1959a, p. 1279). He never tires of insisting on the adaptation of understanding to practical concerns.

Taking advantage of the principle (OV), we can make the following substitution in the principle (DJ) above, and reach the principle (AT) (AT for "any time"):

(AT) If the event E takes place at t_0, then at any time there is de jure the true judgement J that E takes place at t_0.

Of course, there is no problem if the judgement J is moved to the right, down the arrow of time. But if we move the judgement J to the left, up the arrow of time, problems are in view. Here, we reach the "retrograde movement of the true" (RMT), represented in Diagram 33.2.



In order for the problem to arise in its primitive Bergsonian form, we have yet to introduce a tensed view of time and then to pull t_0 into the *future.* This means that we have to insert, in Diagram 33.2, an index *N* (*N* for "now") between t_0-Δt and t_0, which brings us to the following formulation (RMT_{FT}; FT for "future time"):

> (RMT_{FT}) If *E* takes place at a future time t_0, then at any time (including at future times $< t_0$, at present and in the past) there is de jure the true judgement *J* that *E* takes place at that future time t_0.

Strikingly, as we shall see, (RMT) will also come in an innocuous form, (RMT_{PT}; PT for "past time"). This means that we have to insert, in Diagram 33.2, an index *N* (*N* for "now") to the right of t_0.

> (RMT_{PT}) If the event *E* takes place at a past time t_0, then at any time (including at times past $< t_0$) there is de jure the true judgement *J* that *E* takes place at that past time t_0.

33.5 On the Convertibility of Prior Truth and Anterior Possibility

Before going into more detail, we must notice that the retrograde movement of the true closely connects with the notion of the possible such as it is treated by Bergson (see 1959a, Chap. 3). We may say that the retrograde movement of the true and a corresponding "retrograde movement of the possible" fully *overlap*. To say there is an antecedently true judgement about an event *E,* on Bergson's account, amounts to

saying: it is antecedently possible that *E* and vice-versa. This is surprising, because on the usual view there are unrealized possibilities. In such cases, we would like to say that it is antecedently possible that an event *E* will happen; but not, at the same time that there is the antecedently true judgement that *E* will happen (because *E* will not happen). Bergson rejects this. Generally speaking, Bergson is strongly opinionated on the issue of possibility,[3] and his position can be expressed by means of what is usually called the "principle of plenitude" (PP). The principle (PP) says that what is possible also gets realized at some time.

(PP) If the event *E* is possible (untensed), then at some time *E* is actual (untensed).

In Bergson's view, a principle of plenitude applies in a degenerate way, which specifies an even tighter link between possibility and actuality:

(PP_B) If the event *E* is possible (tensed), then *E* is actual (tensed).

Here is how Bergson expresses himself: "There is more, and not less, in the possibility of each of the successive states, than in their actuality. Indeed, the possible is nothing but the actual, with a mental act added to it; a mental act which projects the image of the actual in the past once the actual has taken place" (1959a, p. 1339). Or alternatively, "the creation of possibilities coincides with the creation of the corresponding actualities; they are not created ahead of their actualities" (1959a, p. 1262). Given these elements, the basic insight comes as the contraposition of (PP_B):

($Contrap_{PPB}$) if the event *E* is not actual (tensed), then *E* is not possible (tensed).

This formula captures the restrictive view of possibility characteristic of Bergson (see 1959a, p. 1267). In what follows, then, "antecedently true" and "antecedently possible" will be treated as convertible. Bergson expresses much of what he wants to say in relation to the possibility of an event *E,* rather than in relation with the true judgement that an event *E* is to take place.

33.6 The Retrograde Movement of the True: What Is *Not* Wrong with It

Bergson considers the retrograde movement of the true (RMT_{FT}) as illegitimate.

What is at stake for him, we may say, is the existence of certain temporal limits of truth-making, limits that (RMT_{FT}) fails to respect (though (RMT_{PT}) does not!). But why should we admit such limits? What's wrong with (RMT_{FT})? Is this structure not basic for all our deliberation, for all our previsions, and therefore for our capacity to be active on the basis of anticipation? In anticipation, we judge now that

[3] Quite in tune with other philosophers of the early twentieth century —one thinks of R. Carnap's *Scheinprobleme* (1928)—Bergson holds that many questions taken to be important in philosophy are merely consequences of defective assumptions. The usual view of possibility involves such assumptions.

such and such an event will happen, and often we are right. After deliberation, we end up doing—quite often—one of the things we have been deliberating about. The conjunction of our anticipation of an event *E* and of the future realization of *E* then satisfies the formula (RMT_{FT}) without problem—or so it seems, when we look at this retrospectively.

I begin this section by considering two points *that do not count* for the explanation of the illegitimacy of (RMT_{FT}):

- Bergson's criticism does not relate to the epistemic difficulties of prevision. His problem is not one which would have the following expression: Judgements as such aptly characterize what will happen, but given that we cannot know about these future events, we better avoid making any judgements about them. This is not what Bergson argues about.[4] His quarrel with (RMT_{FT}) is really linked to the question of truth.
- Bergson's criticism does not overlap with the long-established problems of "future contingents" and of "logical determinism". In spite of his familiarity with Aristotelian topics, his concern is not specifically with what happens with future events normally given as contingent. And however close he may be to the great Aristotelian tradition according to which truth about the future is a threat for matters that are taken as important, he has a view of this threat that is different from the one which constitutes the usual problem of future contingents. He never identifies as a problem that—perhaps—true judgements about the future will make the future necessary, suppress contingency, etc. Bergson's criticism of (RMT_{FT}) is focused on a much more specific view he holds about the relation between the truth-bearer and the truth-maker. And given his stance on this, the problem of future contingents *vanishes*. To bring the point to a pitch: Given that (RMT_{FT}) is false (in this case there is no retrograde movement of the true), the traditional problem of future contingents does not arise at all!

33.7 The Temporal Condition on the Representative Capacities of the Judgement

Let us come back to our question: Bergson considers the retrograde movement of the true (RMT_{FT}) as illegitimate. What is at stake for him, we may say, is the existence of certain temporal limits of truth-making, limits that (RMT_{FT}) fails to respect. But why should we admit such limits? What is wrong with (RMT_{FT})?

The point is that we have to take heed, we may say, of a "time of the representative capacities of a judgement". This has to do with the content of the judgement, and therefore with its semantics. The semantic condition, requiring a temporal relation between what represents and what is represented, is conveyed by means of the

[4] Of course, epistemic restrictions to foreknowledge can be philosophically sophisticated as Karl Popper's example shows (1960).

terms that are constitutive of the judgement. Bergson puts his point in the following rhetorical interjections: "As if a judgement could have pre-existed to the terms which enter into its composition! As if these terms would not themselves date from the time when the objects which they represent did appear!" (1959a, p. 1263) Basically, the representative capacity of a judgement concerning an event *E* cannot be formed ahead of *E*. Alternatively, an event of the same type must be available to account for the representative capacities of the judgement. With this possibility in view, I represent, in Diagram 33.3, the circumstances in which (RMT)—given the semantic condition—can be legitimate.

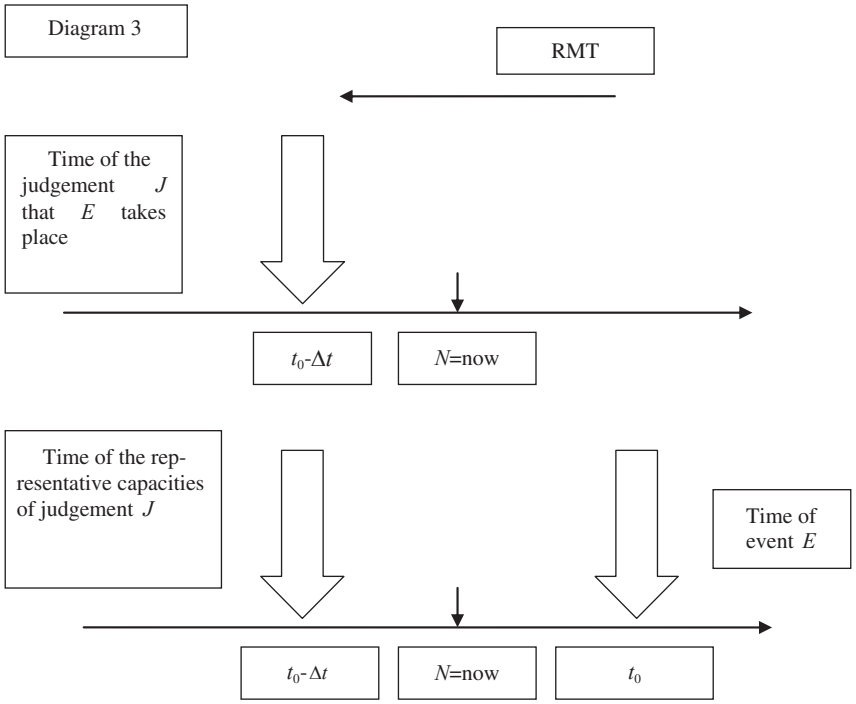
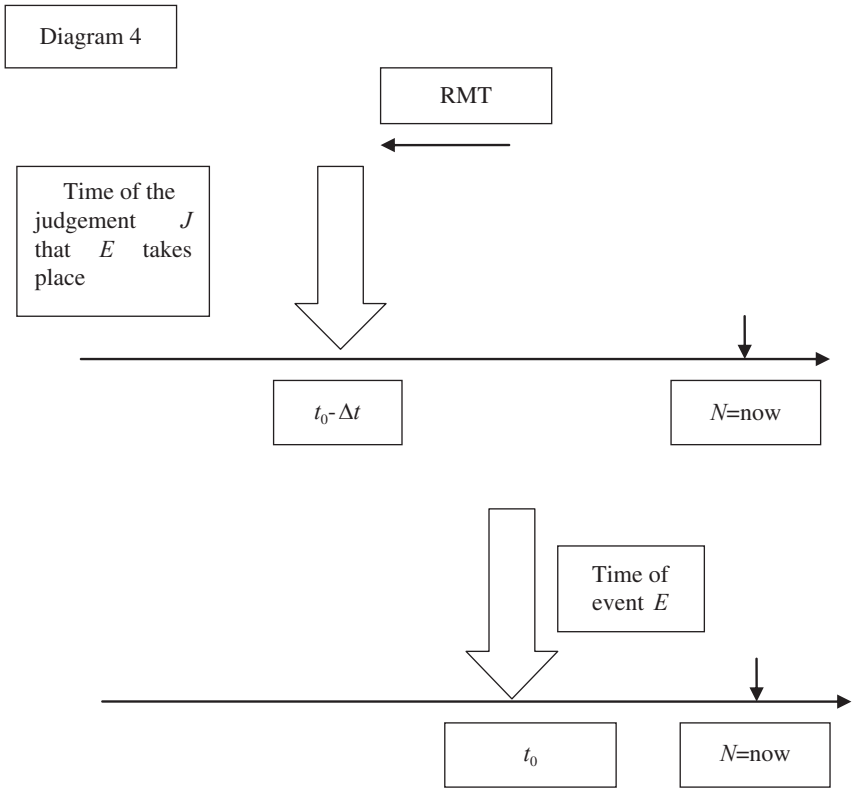


Diagram 33.3 applies insofar as the nonliving domain is concerned (here there is a simple unfolding of events, *déroulement*). Here, successive events of the same type or events resulting from a mere rearrangement of data are available. But Diagram 33.3 does not apply where life or art are concerned. Even though, Bergson avers, "[philosophers] prove unable, whatever they do, to figure out to themselves what radical novelty (*nouveauté*) and imprevisibility are" (1959a, p. 1260). With radical novelty, the semantic condition of the capacities of the judgement to represent what it has to represent is not satisfied. Then, providing representative capacities for a judgement requires simultaneity in time with the truth of the judgement. In the absence of representative capacities, there is no proper judgement, no truth-bearer. So

in such circumstances (RMT) is false. This amounts to a very specific view of the "relativity of truth", a view of a kind which is not discussed as such by Kazimierz Twardowski (1900). We may add that Bergson has his own approach to the rejection of what we may call, with Peter Simons, "platonism about truth-bearers and their parts" (2003, p. 38).

33.8 The Retrograde Movement of the True: The Last Twist

Now that we have reached this point, it is necessary to take account of one more original feature of Bergson's position. The rejection of (RMT) is strictly tied to a tensed view, with consideration of the present/future break. Once we swing over to the past, (RMT) is not restricted any more (see Diagram 33.4): "Its possibility [i.e., the possibility of a given event], which does not precede its actuality, will have preceded it once the actuality has appeared" (1959a, p. 1340).



This gives a feeling of a "growing-time" view of time; all the time past is basically available to ensure that for a given judgement, the semantic requirement is met. It is worth remarking also, that in a very specific sense, we have here a breach of the principle of the irrevocability of the past. A given scheme of things, where (RMT) does not apply, passes, with the passage of time, into to a scheme of things where (RMT) does apply. Bergson especially underlines this change in respect to possibility (see 1959a, p. 1340). The retrograde movement of possibility, which does not take place in respect to future events, takes place once those very events are present or past. So the past is changed in respect to the possibilities it contains; *past* possibilities progressively crop up in virtue of the actualities which in the course of time the novelty of things brings forward.

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