NEBRASKA SYMPOSIUM ON MOTIVATION

VOLUME 56

Emotion and the Law

Psychological Perspectives

Brian H. Bornstein
Richard L. Wiener
Editors

Nebraska Symposium on Motivation

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Brian H. Bornstein · Richard L. Wiener
Editors

Emotion and the Law

Psychological Perspectives

Springer

Editors
Brian H. Bornstein
University of Nebraska-Lincoln
Lincoln, NE
USA
bbornstein2@unl.edu

Richard L. Wiener
University of Nebraska-Lincoln
Lincoln, NE
USA
rwiener2@unl.edu

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Acknowledgments

The seed for this book was planted several years ago, when our own research interests in the emotional aspects of legal decision making led us to edit a special issue of *Law and Human Behavior* on the topic (Wiener and Bornstein 2006). In the course of reading the submissions and writing our own papers for the special issue, we came to realize just how many people were doing excellent work in the area and were addressing a broad array of interrelated topics under the "law-and-emotion" umbrella. This realization, in turn, had three salutary consequences. First, it made us excited and energized to know that our fellow researchers were doing so much good stuff. Second, it inspired us to undertake several new research projects, both together and with our individual research groups. And third, the awareness that there was so much more out there led us to propose organizing the symposium that produced this book.

There are a number of people whose contributions to this endeavor we wish to acknowledge. We are grateful to the UNL Psychology Department's Motivation Symposium Committee, which provided us helpful feedback as we developed the proposal. We are especially indebted to Deb Hope, Chair of the Committee and Series Editor, for her encouragement and support throughout both the symposium and book editing process; and to Dave Hansen, Psychology Department Chair, for providing the departmental infrastructure that made our job so much easier. A number of departmental staff helped with the symposium, and we are grateful for their efforts. We particularly want to single out Claudia Price-Decker, whose attention to the myriad logistical details of hosting the symposium (travel, food, lodging, program, etc.) freed us to concentrate on the speakers and their presentations. This was the 25th Nebraska Symposium on Motivation that Claudia has worked on, and her institutional memory, efficiency, and good humor were invaluable.

A number of law-psychology graduate students assisted in chauffeuring and entertaining speakers, and we thank them for their efforts, especially Jessica Snowden, who "ran point" and coordinated the airport and restaurant arrangements. We have benefited from the efforts and expertise of several individuals at Springer, especially Sharon Panulla and Anna Tobias, and we thank them for their contributions and patience. It goes without saying (but we'll say it anyway) that we thank all of our speakers/authors, who took time from their busy schedules to participate in the symposium and to write chapters for this volume. We were fortunate to have

such an incredibly accomplished group of scholars, who also turned out to be a joy to work with. We thank them for making our job as editors so easy.

Finally, we thank the women in our lives: Christie, Lillian, and Melissa; and Audrey, Samantha, and Elissa. You put up with our absences and our anxieties, and your steady support enables us to do the work that we do, while making our time away from work so enjoyable. Thank you for all that and more.

Reference

Wiener RL, Bornstein, BH (2006) Emotion in legal judgment and decision making [Special Issue]. Law Hum Behav 30(2):115–118

Preface

The volume editors for this 56th volume of the Nebraska Symposium on Motivation are Richard L. Wiener and Brian H. Bornstein. The volume editors coordinated the symposium that led to this volume, including selecting and inviting the contributors. My thanks go to Brian and Rich and to our contributors for their outstanding presentations and chapters. This interdisciplinary work on emotion and the law takes its rightful place in the finest scholarly traditions of this historic series.

This Symposium series is supported by funds provided by the Chancellor of the University of Nebraska-Lincoln, Harvey Perlman, and by funds given in memory of Professor Harry K. Wolfe to the University of Nebraska Foundation by the late Professor Cora L. Friedline. We are extremely grateful for the Chancellor's generous support of the Symposium series and for the University of Nebraska Foundation's support via the Friedline bequest. This symposium volume, like those in the recent past, is dedicated to the memory of Professor Wolfe, who brought psychology to the University of Nebraska. After studying with Professor Wilhelm Wundt, Professor Wolfe returned to this, his native state, to establish the first undergraduate laboratory in psychology in the nation. As a student at Nebraska, Professor Friedline studied psychology under Professor Wolfe.

Debra A. Hope
Series Editor

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Contributors

Brian H. Bornstein
University of Nebraska-Lincoln, Lincoln, NE, USA
bbornstein2@unl.edu

Jeremy A. Blumenthal
Syracuse University College of Law, Syracuse, NY, USA
jblument@law.syr.edu

Joseph P. Forgas
School of Psychology, University of New South Wales, Sydney, NSW, 2052, Australia
JP.Forgas@unsw.edu.au

Neal Feigenson
Quinnipiac University School of Law, Hamden, CT 06518, USA
Neal.Feigenson@quinnipiac.edu

Cara Laney
University of Leicester, Leicester, UK
cl136@leicester.ac.uk

Joel D. Lieberman
University of Nevada, Las Vegas, NV, USA
jdl@unlv.nevada.edu

Elizabeth F. Loftus
University of California, Irvine, CA, USA
eloftus@uci.edu

Norbert L. Kerr
Michigan State University, East Lansing, MI, USA
kerr@msu.edu

Richard L. Wiener
University of Nebraska-Lincoln, Lincoln, NE, USA
rwiener2@unl.edu

Chapter 1
Emotion and the Law: A Field Whose Time Has Come

Brian H. Bornstein and Richard L. Wiener

Psychological research on emotion has a rich and varied history. A number of protopsychologists (e.g., Aristotle, Aquinas, Descartes, Hume) wrote about the effect of the passions on human thought and behavior, and empirical work on emotion dates back over 100 years (e.g., James 1890/1950). Emotion research has long been a central component of social, personality, and clinical psychology, and it is increasingly being integrated into other psychological subdisciplines, such as cognitive and physiological psychology. In fact, the contributions of neuroscience to understanding the role of emotion in thought and decision making has recently "taken off," as cataloged in recent reviews of this burgeoning field of research (e.g., Winkielman and Cacioppo 2006). In contrast to the neuroscientific approach, the work collected in the present volume focuses on the role of emotion in *molar* judgments and behavior (Forgas et al. 2006), the conduct that is characteristic of the many actors in the legal system. As such, this work focuses on social cognitive models of behavior and judgment in the real-world context of law and policy making.

Much of this work distinguishes among various types of affective responses, such as emotion, mood, and affect (e.g., Davidson 1994; Forgas 2003; Schwarz and Clore 2007). These distinctions are important, as the nomenclature one uses (e.g., specific emotions such as fear or anger, versus a more diffuse positive or negative affective state) has both theoretical and methodological implications. Researchers typically speak about *affect* as a broad generic term to include all types of affective states but reserve the term *mood* for an undirected, unconscious, low intensity but enduring state, which has no clearly identifiable or specific cause (Forgas et al. 2006). Usually, the term *emotion* refers to affect tied to a particular conscious event, high in intensity but short-lived and easily labeled and recalled. Indeed, the contributors to the present volume go to great lengths to be precise in exactly what sort of affective response they are describing. However, because the contributors, like many others in the field, show considerable variation in exactly what they define as different emotional states,

B.H. Bornstein (✉)
University of Nebraska-Lincoln, Lincoln, NE, USA
e-mail: bbornstein2@unl.edu

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in setting the stage for the following chapters, the present introduction refers to "emotion" as an overarching rubric for all kinds of affective responses.

Given the centrality of emotion to several subfields within psychology, it is not surprising that the earliest work in psychology and law also dealt with emotion. For example, both of the earliest known books devoted to the topic – Hugo Münsterberg's *On the Witness Stand* (1908) and G.F. Arnold's *Psychology Applied to Legal Evidence and Other Constructions of Law* (1906) – had chapters on feeling or emotion (see generally, Bornstein and Penrod 2008). Burtt's (1931) early text on *Legal Psychology* considered emotion's contribution to multiple legally relevant behaviors, such as memory and deception. Thus, the conjunction of law and emotion is hardly new (indeed, as Jeremy Blumenthal argues, it dates back 3,400 years; see Chap. 7). Nonetheless, the exact nature of the relationship is intricate and not yet fully explored.

Law and Emotion: When, Why, How, Where, and Who

As Skovran et al. (2009) point out, emotion has both crept into law through the back door and entered directly through the front door. Indeed, some would still try to argue along with Aristotle that law is reason free from emotion. Under such an approach, jurors and other legal decision makers are rational actors attempting to conduct cost-benefit analyses for each potential verdict by simply adopting the verdict that maximizes the likelihood of a positive change in the state of the environment (Korobkin and Ulen 2000). Simply put, jurors as rational legal decision makers select the verdict that best applies the law of the case to the facts of the case, as they understand both to be. However, there are many examples of legal decision making that show how policy intentionally incorporates emotion into its process. For example, as Maroney (2006) points out, judges frequently admit gory evidence or photos as evidence in a trial, civil juries compensate plaintiffs for emotional suffering, and criminal juries consider defendant remorse and victim impact statements in determining sentences for brutal crimes. Furthermore, some legal commentators argue that one of the defining parameters of punishment in criminal trials is the fact that the jurors condemn the perpetrators for the criminal acts that they commit and that the condemnation is a function of the criminal conduct proportional to the heinousness of the perpetrator's actions (Feinberg 1995; Pearce 2007; Schopp 1993). Some of the emotional features of that condemnation are very likely the anger, disgust, and contempt that people feel toward wrongdoers who have committed heinous crimes against society. This same sense of condemnation or outrage applies to the awarding of punitive damages in civil trials (Kahneman et al. 1998).

At the same time, emotion may be either incidental (independent of the judgment to be made) or integral (a reaction to the evidence or to a required judgment), and under each path it may have unintended consequences for the final judgment (Feigenson and Park 2006). For example, Skovran et al. (2009) showed that increases in anger across a capital murder trial predisposed jurors to be more certain in a death sentence, and Ask and Granhag (2007) demonstrated that sad criminal

investigators were more likely to consider disconfirming evidence than were angry investigators. The relationship between law and emotion is complex because of the lack of specificity regarding when, why, how, where, and for whom emotion should influence legal judgments. Emotions might have an effect at any stage of legal proceedings: prior to legal judgments, as when an eyewitness's depression leads her to encode an event poorly; during legal judgments, as when a judge's outrage at a convicted defendant's conduct leads to a harsh sentence; or afterwards, as when a juror regrets having allowed himself to be persuaded by the majority during deliberation. Indeed, Wiener and colleagues (Wiener et al. 2005a, b, 2006b, 2007), in their studies of consumer use of credit, have demonstrated that law itself (here bankruptcy law) makes assumptions, sometimes unfounded, about the role of emotion (or in this case, lack of emotion) in judgment and behavior. For example, Wiener et al. (2007) showed that enhanced credit card disclosure rules that are part of the Bankruptcy Abuse and Prevention Reform Act of 2005 have only limited influence in persuading people to use their credit cards wisely. They found that consumers' forecasted emotions after buying or not buying products moderated the impact of disclosure enhancements. Additional research showed that experienced emotion at the time of purchase also limited the effectiveness of enhanced disclosure (Wiener et al. 2006b). Our field needs more work on the pervasiveness of emotion in all aspects of law as it attempts to regulate human conduct.

The questions of why and how emotions influence legal judgments are closely related, and theories of emotion and social judgment (e.g., Forgas 1995) address both. "How" is likely easier to answer than "why," and a number of plausible explanations have been proposed in which one's emotional response somehow alters the decision-making process itself or provides information that is relevant to the decision (see Feigenson and Park 2006; Wiener et al. 2006a; also the chapters by Forgas and Feigenson, this volume). Of course, the explanations differ in their description of the precise mechanism or mechanisms by which this occurs. The most common answer to *why* emotion influences judgment is that it is somehow adaptive, but again, the particularities (e.g., How is it adaptive? Are some emotional states more adaptive than others?) are complicated (see, e.g., Forgas et al. 2008).

The questions about "where" and "for whom" emotions influence legal judgment are likewise related. If one were to go simply by the weight of the research, the answer to "where" would be "in the jury box/deliberation room" and "at crime scenes/lineups," and the answer to "for whom" would be "jurors" and "eyewitnesses." However, emotions can and do influence the decision making of numerous other legal actors, such as judges, victims, attorneys, and police (Maroney 2006). For example, just as gruesome, emotion-arousing evidence can influence jurors' decision making by making them more likely to convict (Bornstein and Nemeth 1999; Bright and Goodman-Delahunty 2006), it might also make judges less sympathetic to defendants, victims more likely to report the crime, prosecutors more likely to file charges and seek a severe penalty, and police more zealous in their investigation. Emotion will not affect all of these legal actors in similar fashion; for example, Wessel et al. (2006) found that judges were less susceptible than jurors to witnesses' emotional displays.

This overview of the myriad ways in which law and emotion intersect reflects the fact that emotion plays a central role in many legal questions. Emotional considerations often precede, surround, and follow legal judgments and decisions (Wiener et al. 2006a). As noted above, legal actors' emotional states are legitimate considerations in many contexts. As Maroney (2006, p. 120) observes, "The point [that law takes account of emotion] is so obvious as to make its articulation almost banal." Yet the exact manner in which emotion should and does influence these judgments is far from clear. For example, emotion can be elicited by a source integral or incidental to the judgment task, and it can affect judgments either directly or indirectly (Feigenson and Park 2006).

The question of the processes underlying emotion's role in legal judgment is closely tied to the question of emotion's role in social judgments and decisions more generally (e.g., Forgas 1995, 2003; Lerner and Keltner 2000; Loewenstein and Lerner 2003; Pham 2007; Schwarz 1990). A review of the many ways in which emotion can and does influence legal judgment is well beyond the scope of this introductory chapter (see Wiener et al. 2006a; Feigenson and Park 2006). However, a recent and important model that Baumeister and colleagues (2006, 2007) introduced into the literature offers a theory that has great potential for understanding how experienced emotion – both consciously appraised and unconsciously triggered (Smith et al. 2006) – might influence judgments and behaviors in the law. The strength of the approach is that it also specifies the individual influence of anticipated and forecasted emotions, the relationship between anticipated and forecasted emotions, and finally, the combined influence that both factors exert on both judgments and behavior. Accordingly, people experience emotion in a variety of contexts, including legal situations, and the emotions that they experience serve as a feedback mechanism that assists them in learning the social (and maybe legal) rules that govern those situations. Later, when these emotions arise as moods triggered in new situations similar to the older ones, they indeed help to activate the original rules. For example, angry jurors learn to lower the standard of proof that constitutes a guilty verdict (Skovran et al. 2009), and angry criminal investigators learn to avoid disconfirming evidence in initial encounters (Ask and Granhag 2007). These emotions later trigger activation of these rules when the context is a match. Here, experienced emotion influences judgments and decisions directly but influences behavior only indirectly.

On the other hand, people come to anticipate the positive and negative feelings associated with contextual situations so that legal decision makers' forecasts of future affect help shape their judgments, decisions, and behavior. As Meller and colleagues (Mellers 2000; Mellers et al. 1997, 1999) have shown, people act to avoid negative feelings and to secure positive feelings independent of cost-benefit analyses of the inputs and outputs in their environments. While the interaction of anticipated and experienced emotion will never tell the whole story of legal decision making, it does go a long way to help us understand how emotion has the power to influence the outcomes of those processes. The chapters in this volume highlight in detail how these emotional events take place in the world of legal decisions and how they can influence the judgments and choices that legal actors make.

Despite the legitimacy of emotion in many legal situations, the law has a double standard with respect to emotion (Bornstein and Wiener 2006). In many situations, the law presumes that legal decision makers can set their emotions aside and behave as cool, dispassionate, rational actors (Maroney 2006; Wiener et al. 2006a). Examples include the expectation that jurors not be unduly influenced by graphic evidence (Bornstein and Nemeth 1999) and adhere to the letter of the law even when it violates their moral intuitions of fairness (Finkel 1995; Horowitz et al. 2002). Despite the complex nature of the intersection of law and emotion, in the last couple of decades a number of legal and psychological scholars have begun to tease apart the relationship (e.g., Bandes 1999; Feigenson 1997; Feigenson and Park 2006; Kahan and Nussbaum 1996; Maroney 2006; Nussbaum 2004; Wiener et al. 2006a). The present volume continues those efforts. In particular, it emphasizes how interdisciplinary research can contribute to the dialogue over the proper role of emotion in legal settings.

Emotion and Law: Multi-, Inter-, and Intradisciplinary Approaches

Psychology and law, by its very nature, is ideally situated to benefit from the current scientific trend toward diverse research teams rather than solitary investigators (Wuchty et al. 2007). Yet despite the longstanding interest in emotion in both psychological and legal circles, the efforts have been more parallel than intersecting. Thus, although law and emotion scholarship is clearly *multi*disciplinary – drawing on psychology, law, and related social scientific (and even biological) disciplines – it is rarely *inter*disciplinary. Multidisciplinary research is additive, aggregating the work of experts in different fields (Cacioppo 2007). This approach is certainly beneficial, but after solving specific problems the experts typically "return[ ] to their own disciplines, largely unchanged by the collaboration" (Cacioppo 2007, p. 3). This reflects the natural tendency for scholars to speak and write in their own disciplinary idioms, to attend discipline-specific conferences, and to publish in discipline-specific journals. Though perfectly understandable, and doubtless advantageous in some respects, this isolationism inevitably leads to parochialism and an absence of cross-fertilization.

Interdisciplinary research, in contrast, is not merely additive but should instead be interactive, thereby making the whole more than the sum of its parts (Cacioppo 2007). Although, like multidisciplinary research, it often involves the efforts of multiple individuals from diverse disciplines, it does not have to; a single researcher can be trained and well-versed in more than one discipline. Because it has the potential to be transformative, interdisciplinary work requires innovation, and it is therefore riskier and, in many respects, harder. It takes individuals out of their disciplinary comfort zones. Yet along with the greater risk comes the potential for greater reward. At its best, law-psychology scholarship is not merely multidisciplinary, but fully interdisciplinary as well.

We sought to address this issue in the *Law and Human Behavior* Special Issue (Wiener and Bornstein 2006), and the present volume continues that effort.

As with any psycholegal research, to be informed and relevant, psycholegal research on emotion should draw on appropriate social scientific theories and methodology and be well grounded in applicable law and policy (Blumenthal 2002; Wiener 2007). The contributors to the present volume do just that. They have training in both disciplines, incorporate both in their teaching and research, and stand at the interface of psychology and law. Much of the research that they describe in the following chapters has been conducted in an interdisciplinary fashion.

In addition to these *inter*disciplinary concerns, there are *intra*disciplinary stress points as well, which take two manifestations. The first reflects the occasional tension among various psychological subdisciplines. Researchers within every psychological subfield – social, cognitive, developmental, personality, clinical, physiological, industrial-organizational, etc. – address the topic of emotion. This dispersion is generally a good thing, as it highlights the topic's richness and complexity; but, as with multidisciplinary scholarship, it can lead to parochialism and to difficulty formulating a comprehensive theory of emotion's role in human thought and behavior. We hold out hope that interactive models that look at both experienced and anticipated affect have the potential to tie together the many threads that comprise the literature in this area.

The second manifestation of intradisciplinary conflict is the tension between basic and applied research. This tension has characterized experimental psychology since its very origins (Benjamin 1997) and particularly bedevils those psychological fields, like psychology and law, that seek to apply their research findings directly to practical matters and public policy (Bornstein and Meissner 2008). Not insignificantly, the individual whom many regard as the founder of psychology and law, Hugo Münsterberg, himself was ambivalent about the proper place of applied psychology (Benjamin 2006). Although it is not impossible to integrate basic and applied approaches in psycholegal research, it certainly is challenging (Lane and Meissner 2008). If done successfully, however, the simultaneous benefits to psychological theory and to legal policy are both enormous and obvious (Wells 2008; Wiener 2007). The editors of this volume are committed to "critical multiplism" (Shadish 1993) as an approach to science that looks for knowledge in the intersection of different methods, theoretical constructions, disciplinary approaches, and problem definitions. We get most excited when applied and basic research together inform problem solving efforts across methods, theories, and disciplines; and we believe that under these conditions researchers, policy makers, and the public gain the most from our scientific enterprise. We hope that this volume shows the beginning of a convergence about the role that emotion does and should play in legal decision making.

Chapter Overview

To varying degrees, all of the book's chapters wrestle with the normative, descriptive, and prescriptive questions concerning law and emotion. That is, what role *should* emotion play in legal judgment (the normative question); what role *does* it play

(the descriptive question); and what steps can we take to ensure that it functions as it should, or should not, depending on whether it is an appropriate factor to consider (the prescriptive question). This simultaneous concern with normative, descriptive, and prescriptive perspectives is one of the things that makes the present volume a unique contribution to law-and-emotion scholarship, and it adds to a "multiplistic" understanding of scholarship in this area.

The body of the book starts with two chapters that provide an overview, simultaneously broad and deep, of the law-and-emotion field. Both chapters apply general theories of emotion to the particular kinds of decisions that legal actors make. Both chapters are excellent examples of interdisciplinary scholarship, but they complement each other in that the chapter by Joseph Forgas is written from more of a psychological perspective, whereas the chapter by Neal Feigenson is written from more of a legal perspective. In Chap. 2, Forgas extends his pioneering work on emotion in social judgment (e.g., Forgas 1995) to legal contexts. This is not Forgas' first foray into the world of law-and-emotion (e.g., Forgas et al. 2005), and to judge from the chapter, it will not be his last. The chapter compares the effects on judgment and decision making of positive versus negative affect, and it relates these states to forensic contexts. One conclusion that we draw from Forgas's work is that one cannot simply say that good moods, bad moods, or neutral moods are best for legal decision makers; rather, policy makers and researchers alike ought to consider the valence of the emotion and its other dimensions, along with the specific nature of the legal judgment at hand. The work in this chapter points out much of the unfinished basic research that social psychologists need to conduct to learn more about the specific ways in which affect is infused into legal judgments.

The chapter by Feigenson (Chap. 3) takes something of the opposite approach. Grounding his questions solidly in legal decision making, he explores what theories of emotion and cognition have to say about how emotion influences legal judgment, and whether it should. The chapter extends his previous work on the topic (e.g., Feigenson 1997; Feigenson and Park 2006) by applying his framework to two recent test cases, the Jena Six criminal trial and the Securities and Exchange Commission's civil fraud case against James Koenig. Feigenson concludes his chapter with some very practical recommendations on what to do about unwanted effects of emotion on legal judgment.

The next three chapters address the role of emotion in specific kinds of legal judgments. In Chap. 4, Norbert Kerr addresses the role of emotion in juror decision making, specifically, what determines the emotions experienced by jurors, and how those emotions might affect their judgments. Kerr has been one of the most prolific and insightful commentators on these questions, addressing, for example, the emotional components of jury nullification (e.g., Horowitz et al. 2006) and pretrial publicity (Kramer et al. 1990). In the present chapter, he reviews these bodies of work and presents new data on yet another situation in which emotion might affect jurors' verdicts – namely, trials containing heinous evidence. These different contexts are instructive because they illustrate the different legal approaches to emotional influence: Sometimes it is expressly barred (pretrial publicity), sometimes it is allowed but discouraged (jury nullification), and sometimes it is allowed for

some judgments (effect of heinousness on sentencing) but not others (effect of heinousness on guilt). Exploring the effects of emotion on different kinds of judgments allows researchers and policy-makers to disentangle emotion's legitimate and inappropriate consequences in the legal domain. There is a unique opportunity here for legal commentators who focus on comparing condemnation (e.g., anger, disgust, outrage, contempt) in criminal and civil proceedings (Feinberg 1995; Pearce 2007; Schopp 1993) and empirical researchers who study the role in court of specific dimensions (e.g., valence, certainty, and responsibility) of a variety of negative (anger, disgust, and contempt) and positive emotions (hope, excitement, happiness) (e.g., Skovran et al. 2009) to forge an interdisciplinary effort. The result could be an understanding of how the various emotions that are triggered by heinous evidence do and should influence legal decision makers, and Kerr has led the way for us in his important and interesting chapter.

The emotional effects described by Kerr are often subtle, but those described in the next chapter, by Joel Lieberman, as he takes on the complex issue of hate crimes, would seem to be less so. Indeed, there is a burgeoning literature on hate crimes in psychology (Boeckman and Liew 2002; Cowan et al. 2002; Herek et al. 2002; Wiener and Richter 2008), but researchers have largely tackled the problem from a cognitive and not an emotional point of view. Indeed, our own work in this area has tried to measure the tension that research participants perceive between the free speech and equal protection principles in the Bill of Rights in the United States Constitution (Wiener and Richter 2008). Wiener and Richter found that people attached greater importance to equality principles than free speech principles when evaluating symbolic speech that was alleged to produce discrimination (e.g., displaying burning crosses and confederate flags).

One might wonder whether emotion's effects could ever be any more transparent than in the case of *hate* crimes. On closer inspection, however, the role of emotion is complex even here. For example, hate crimes have a variety of motivations, including, of course, prejudice, but the perpetrators do not necessarily experience intense negative affect during commission of the crime. Lieberman applies *terror management theory* to illustrate how hate crimes can be, in part, a defense against a threatened worldview. Most intriguingly, threats to one's worldview might lead not only to the commission of certain crimes, but also to differing attitudes by others toward hate crimes and to differing perceptions of specific offenses (Arndt et al. 2005; Lieberman et al. 2001). Others' reactions to hate crimes are relevant to the decisions of judges, jurors, and policy-makers. Although people's reaction to a threatened worldview is difficult to modify, Lieberman proposes means to increase tolerance of worldview threats. His arguments make it clear that although hate crimes are, in a sense, emotional by definition, the emotion may not consciously arise from the actual conduct.

A book on emotion and the law would be incomplete without a chapter on emotion's role in eyewitness memory. Cara Laney and Elizabeth Loftus fill this need admirably in Chap. 6 on truth in emotional memories. Loftus was one of the developers of the now widely used "rich false memory" research paradigm, in which researchers employ false feedback to convince adult participants that certain (untrue) events

occurred during their childhoods (Loftus and Pickrell 1995; see also Hyman et al. 1995). The chapter describes the extensive work that she and her colleagues have done on the topic, which has implications for a wide variety of emotional memories. Some of these memories have obvious forensic relevance, such as memories for child abuse; others are less forensically relevant, such as memories for vacations or food experiences, but they nonetheless have significant practical implications (e.g., for nutrition/dieting). Perhaps most importantly, Laney and Loftus describe a number of psychological and neurophysiological techniques – which, alas, are not consistently effective – for distinguishing between true and false memories. Emotion itself is sometimes, though not always, a predictor of a memory's veracity. Distinguishing between true and false memories is clearly an important goal for legal factfinders, such as judges and jurors, whose task it is to weigh the credibility of witnesses reporting emotional memories. Although intuition tells us that emotional reactions should have the potential for assisting with that important differentiation, Loftus' work shows us that we have a long way to go in our basic research to understand the role that emotion plays in false memories. This chapter should inspire even more work with the rich false memory paradigm to understand whether affect is different in true versus false recall and recognition.

The concluding chapter by Jeremy Blumenthal outlines where the study of emotion and the law has been, where it is now, where it might go, and where it should go. This chapter serves several important functions: It comments on the preceding chapters, it summarizes additional ways in which psychological research on emotion is relevant to the legal system (e.g., affective forecasting; Blumenthal 2005), and it identifies areas that are ripe for future research. As Blumenthal observes, extending law-and-emotion scholarship to areas not traditionally studied by psycholegal scholars – such as contracts, property, and legal writing – has the potential to enrich the fields of both psychology and law.

Blumenthal also relies on research findings to make policy recommendations, arguing that once emotion's role in legal judgment has been scientifically established, the legal system needs to develop appropriate safeguards for managing those effects. This "emotional paternalism" (Blumenthal 2007) not only promotes fairness in legal processes, but it also forces legal actors and policy-makers to identify and defend their assumptions and norms. If law-and-emotion scholarship in general, and this book in particular, accomplish those goals, then they can rightfully be considered a success. As the chapters in this volume illustrate, the field is making steady progress down that road. Empirical research on law and emotion is indeed a field whose time has come.

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Chapter 2
Affect in Legal and Forensic Settings: The Cognitive Benefits of Not Being Too Happy

Joseph P. Forgas

Introduction

Imagine the following scenario. It is a cold, rainy day, and as you enter the local news agency to buy a paper, you briefly notice a number of strange items on the checkout counter – a matchbox car, some plastic toy animals, and a few other trinkets, objects that really do not belong in a shop environment. As you leave the store, a young woman approaches you, introduces herself as a psychologist conducting research on memory, and asks you to try to remember as many of the strange objects you have briefly seen in the shop as you can. The question she is interested in is this: Can your slightly negative mood induced by the unpleasant weather improve the accuracy of your eyewitness memory for the objects you saw? More generally, are we better at remembering everyday details when we are in a bad mood, or do people remember more on a bright, sunny day, when they are in a good mood?

This is just the experiment we carried out recently in a suburban Sydney shopping area (Forgas, Goldenberg & Unkelback, 2009). What we found was surprising and contrary to what most people would expect. It turns out that people in a slightly negative mood actually had better eyewitness memory for the observed details of the shop than did happy people who were questioned on a bright, sunny day. In other words, mild negative moods appear to produce surprising cognitive benefits when it comes to performing such everyday tasks as remembering witnessed details, forming judgments of people, detecting deception, and making social judgments and decisions.

All of these tasks are of course of considerable importance in legal and forensic practice. Lawyers, policemen, judges, counselors and court officials spend much of their time making judgments and decisions, trying to recollect and organize memory-based information, attempting to detect deception and untruth, and trying to persuade others. It turns out that there is now good experimental evidence demonstrating that all of these mental processes can be significantly and reliably influenced by a

J.P. Forgas
School of Psychology, University of New south Wales, Sydney, NSW, 2052, Australia
e-mail: jp.forgas@unsw.edu.au

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person's mood state. Affective influences may play an even more important role in influencing the thoughts and behaviors of lay participants in legal and judicial proceedings, such as jury members, witnesses and defendants (Bornstein et al. 2007; Wiener et al. 2006). Recent discussion within the legal literature suggests that once we become aware of these psychological effects, it is important for third party professionals to intervene and defend individuals from their own cognitive biases and distortions (Blumenthal 2007; see also Blumenthal this volume). Such "emotional paternalism" within the legal system can only be effective, however, if it is soundly based on empirical research evidence.

Surprisingly, the psychological processes that allow affective states to influence our thoughts, judgments and behaviors are still incompletely understood (Forgas 2002). The role of affective states in the way the legal system operates and judicial decision making in particular is only now beginning to be recognized (Bornstein et al. 2007; Wiener et al. 2006). This chapter will review the history and antecedents of research on mood effects on social cognition, the theoretical foundations of this work will be discussed, and a number of experiments demonstrating mood effects on thinking and judgments will be described. The aim of this paper is thus to elucidate the psychological mechanisms that are responsible for the observed influence of affective states on our thinking and behavior, and the practical implications of this research in legal and forensic settings will also be considered.

History and Background

The role of feelings in cognition and behavior has fascinated writers, artists and laypersons since time immemorial. Following some philosophers of antiquity, such as Plato, most thinkers throughout the ages regarded affect as a potentially dangerous, invasive force that subverts rational judgment and action. The idea that emotions are somehow primitive, uncontrollable and invasive gained perhaps its most notorious expression in Freud's speculative psycho-dynamic theories early last century. A central tenet of Freud's system was the view that affect can somehow "take over" thinking and behavior unless scarce psychological resources are deployed to control these impulses. Some early experiments seemed to support this view; for example, attempts to suppress negative affect such as fear were found to "facilitate the tendency to project fear onto another social object" (Feshbach and Singer 1957, p. 286).

It seems then that one of the more enduring puzzles about human nature concerns the fascinating and still poorly understood interplay between thinking and feeling, that is, between rational and emotional ways of dealing with the world around us. Affect is a ubiquitous and powerful phenomenon in our lives, yet research on human affectivity has been neglected until recently. Of the three basic faculties of the human mind that dominated philosophy and empirical psychology for the last few hundred years – cognition, affect and conation – affect arguably still remains the last and least well understood (Hilgard 1980).

What then is the function of affective states? In particular, is there an identifiable adaptive advantage that humans derive from experiencing moods? It seems intriguing that despite our apparently never-ending quest for happiness and satisfaction, the human emotional repertoire is nevertheless heavily skewed towards negative feelings. Four of the six deeply ingrained basic emotions identified in humans with distinct physiological substrates are negative ones – fear, anger, disgust and sadness – suggesting that these emotions were adaptive in the highly dangerous and precarious ancestral environment, preparing the organism for flight, fight or avoidance in the face of danger (Forgas et al. 2008). The adaptive functions of fear, anger and disgust in our ancestral environment are easily discernible. But what can we say about sadness?

The possible adaptive functions of sadness in particular remain puzzling and poorly understood. Even though sadness is clearly bothersome and provides no hedonic benefit, it remains one of the most enduring and common affective states (Ciarrochi et al. 2006). Indeed, throughout human history much effort has been expended in controlling sadness and dysphoria, and this never-ending quest remains a major objective in contemporary clinical practice. One might even argue that dealing with various forms of sadness is the major task of clinical psychology; if sadness was not such a widespread and ubiquitous phenomenon, there would be much less demand for psychologists and academics who teach them, and some of us might well be without a job…

It is all the more surprising, then, that so much of the recent applied research on functions of affect has focused on the beneficial consequences of positive affect (Forgas and George 2001). It has been variously suggested that feeling good promotes creativity, flexibility, co-operation, integrative thinking, successful negotiation, work motivation, relationship satisfaction and a host of other desirable outcomes (Forgas 1994, 1998, 2002; Forgas and George 2001). In contrast, most experimental and clinical work emphasized the need to limit, control and avoid negative affectivity (Ciarrochi et al. 2006; Clark and Isen 1982). If negative affect like sadness offers no functional or adaptive benefits, and is so universally undesirable, what then accounts for its surprising ubiquity?

This chapter will suggest that evolutionary pressures probably shaped the development of all affective responses, including sadness in a way that is highly sensitive to situational requirements. Affective states operate by spontaneously triggering different information processing strategies that appear to be highly adaptive to the requirements of different social situations, and may also assist or hinder people's ability to control and regulate their behaviors (Forgas et al. 2009). The chapter will also describe a series of empirical studies that demonstrate that negative moods such as sadness do in fact confer significant adaptive advantages. This occurs because negative affect promotes a more attentive, accommodating thinking style that produces superior outcomes whenever a cognitive or social task requires detailed, externally oriented, inductive thinking. The objective of this chapter is thus to combine evolutionary theorizing and experimental research on affect and cognition, and so contribute to the age-old quest to understand the relationship between the rational and the emotional aspects of human nature (Hilgard 1980).

In particular, we will emphasize here those aspects of mood effects on cognition that are particularly relevant in legal decision making and forensic judgments – eyewitness memory, social judgments, decisions about guilt, detection of deception, stereotyping and persuasive communication.

A Functionalist Evolutionary Framework

The traditional view of affect as at best bothersome and at worst dangerous has begun to change during the last few decades, with the advent of something like an "affective revolution" in psychology, neuroanatomy and psychophysiology. Slowly, a radically different view emerged that regarded affect as not necessarily a dangerous force, but rather, as a useful and even essential component of adaptive responding to various social situations (Adolphs and Damasio 2001; Damasio 1994; Ito and Cacioppo 2001). Within experimental psychology, the idea that affect is an integral aspect of social thinking and memory was first advanced in the 1980s by Gordon Bower (1981) and Neisser (1982). Others within social psychology, such as Robert Zajonc (1980, 2000) argued that affect also functions as an independent and primary force in responding to social situations, consistent with the view that affect constitutes perhaps the most basic and universal human response system rooted in our evolutionary past as argued by Darwin.

This view has been supported by a number of other lines of evidence that also contributed to the rehabilitation of affect within psychology. For example, numerous studies found that affect plays a fundamental role in how people mentally represent and organize their daily social experiences (Forgas 1979; Pervin 1976). Research on cognitive representations showed that social "stimuli can cohere as a category even when they have nothing in common other than the emotional responses they elicit" (Niedenthal and Halberstadt 2000, p. 381). Affective reactions seem to define the way people mentally represent common social episodes (Forgas 1979). The fundamental role of affect in social life was noted by Pervin (1976) over three decades ago: "what is striking is the extent to which situations are described in terms of affects (e.g., threatening, warm, interesting, dull, tense, calm, rejecting) and organized in terms of similarity of affects aroused by them" (p. 471). Thus, affective reactions do seem to play a universal, ubiquitous and powerful role in how people think and behave in social situations.

So what are the major adaptive functions of affect? Recent psychological research and theorizing identified several important adaptive functions associated with feelings. According to one influential view, the basic function of affective states is to provide feedback signals about progress in goal achievement (Carver and Scheier in press). A great deal of everyday social behavior is motivated by attempts to forecast and achieve future affective states (Gilbert and Wilson 2001), and affect also plays an important role in self-regulation (Forgas et al. 2009). According to another theory the origins of which can be traced to William James, emotional states evolved to trigger specific behavioral responses appropriate to the

situations that elicit them. Thus, emotional appraisals (Smith and Kirby 2001) involve spontaneous cognitive processes that usually produce the most suitable and appropriate affective response to a given situation. In fact it has been argued that such "affect knowledge" can be systematically represented, and a sophisticated "rule system" of appropriate emotional reactions can be constructed that encapsulates these "affect rules" (Forgas and Smith 2003). What makes affective reactions particularly adaptive is that emotional reactions to situational challenges are typically fast, effective and precede systematic evaluations (Zajonc 1980, 2000). One good example is provided by recent research showing that social ostracism produces a surprisingly powerful and emotional "pain affect" involving similar brain regions as do physical pain experiences (Spoor and Williams 2007). The rapid neurological and psychological reactions triggered by affect are helpful in promoting adaptive responses. It is not too far-fetched to suggest, then, that in early evolutionary history, such wired-in emotional reactions were likely to provide distinct survival advantages for our ancestors and still operate today in shaping our information processing strategies and behaviors (Frijda 1986).

Individuals who detect and respond to threats and other social and environmental challenges most rapidly and effectively could derive a fitness advantage over those who do not. Extensive research now documents the helpful and adaptive functions of the emotional response system (Lerner and Keltner 2001). This evidence supports the view that in evolutionary terms, affective reactions operate like domain-specific adaptations that appear to meet the requirements for special design (Forgas, Haselton & Hippel, 2008; Tooby and Cosmides 1992).

If affective states in general have such an adaptive, signaling function, it is reasonable to suppose that even such an apparently "useless" affective state as sadness could promote specific cognitive and behavioral strategies that may promote coping in sadness-eliciting situations. A key suggestion advocated here, now supported by numerous empirical studies, is that mild sadness produces a more attentive, externally oriented and bottom-up thinking style that is likely to be helpful when closer attention to the environment is the adaptive response (see also Bless and Fiedler 2006; Forgas 2007). In order to understand how such an affective signaling mechanism might work, we need first to consider the cognitive processes that are involved in linking affect to thinking and behavior. This will be the task of the next section.

Cognitive Approaches Linking Affect to Thinking and Behavior

Since the early 1980s, the development of information processing theories linking affect and cognition has provided a major impetus for empirical research. Two different kinds of affective influences on thinking have been identified. Affective states can perform an *informative* function, influencing the content and valence of people's memories, judgments, and behaviors (i.e., "what" people think; Forgas 1995, 2002). Secondly, affective states can also exert a *processing* effect, influencing the information processing strategies people employ when dealing with a social or cognitive task (i.e., "how" people think).

Informational Effects

Two kinds of cognitive theories have been proposed to explain the informational effects of affective states, usually producing affect congruency: (a) *memory-based* accounts (e.g., the affect priming model; see Bower and Forgas 2001), and (b) *inferential* models (e.g., the affect-as-information model; see Clore and Storbeck 2006; Clore et al. 2001).

The Informative Functions of Affect: The Memory Account

Several social cognitive theories suggest that affect may influence the kind of memory structures people access when performing constructive cognitive tasks and responding to social situations. This principle was elaborated in the associative network model proposed by Bower (1981), who suggested that affective states should selectively prime associated thoughts and representations that are more likely to be used in constructive cognitive tasks, such as memory recall, social judgments and inferences. There has been strong evidence for such mood-congruent effects in attitudes, memories, and judgments (Bower 1981; Clark and Isen 1982; Eich and Macauley 2000; Forgas and Bower 1987).

Affect priming, however is not a universal phenomenon. It is most likely to occur when the affective state is strong, salient and self-relevant, and the task involves the constructive generation of a response (Eich and Macauley 2000; Forgas 1995, 2002; Sedikides 1995). Fiedler (2001), for example, distinguished between constructive and re-constructive cognitive processes, and argued that affect congruence in memory and judgments is usually the strongest when a task requires open, constructive processing. Tasks that simply call for the reproduction of a pre-existing response and require no constructive thinking should show little or no affect congruence (Forgas 1995). Recent integrative theories, including the Affect Infusion Model (AIM; Forgas 1995, 2002), identify four information processing styles in terms of their (1) openness and (2) degree of constructiveness. According to this model, affect priming and affect congruence should only occur when a task calls for open and constructive information processing, promoting the use of memory-based information in forming responses.

The Informative Functions of Affect: The Inferential Explanation

Alternative theories suggest that rather than using affectively primed information from memory to formulate a judgment or inference, individuals sometimes employ a heuristic shortcut and "may… ask themselves: 'How do I feel about it?' and in doing so, they may mistake feelings due to a pre-existing state as a reaction to the target" (Schwarz 1990, p. 529). This "how-do-I-feel-about-it" heuristic suggests that affective influences on attitudes are in essence due to an *inferential error*, as people misattribute

their affect to an unrelated object or task and treat it as relevant and diagnostic in inferring a response. Affect as heuristic information may play an important role in some spontaneous judgments and behaviors with important legal implications, such as speeding in a car, road rage behaviors, reactions to minority groups, hate crimes, impulsive credit card use and the like (e.g., Wiener et al. 2007).

This theory is conceptually similar to earlier conditioning models developed by Clore and Byrne (1974), who also believed that it is simply an incidental – and mistaken – association between a preexisting affective state and a target that produces affect congruent outcomes. Recent evidence shows that the inferential account can at best offer a partial explanation of affect congruence in memories, judgments and behaviors. People only seem to rely on their affective state as a (mistaken) heuristic inferential cue in rare circumstances when they lack the motivation or resources to compute a more thorough response. For example, the key experiment by Schwarz and Clore (1983) involved telephoning respondents and asking their attitudes about a number of issues. As they presumably had little personal involvement, motivation, time, or cognitive resources to engage in extensive processing to produce a response, respondents may well have relied on their prevailing mood as a shortcut to infer a response.

In a conceptually similar study we asked almost 1,000 people who were feeling good or bad after seeing happy or sad films to complete a series of social judgments on the street after leaving the movie theatre (Forgas and Moylan 1987). As they presumably had little time, motivation and capacity to engage in elaborate processing, again respondents may well have relied on their mood as a simple heuristic cue to inform their responses. Calling people's attention to the source of their affect seems to reduce or even eliminate affect congruence (Clore et al. 2001; Schwarz 1990). Contrary to common claims, this finding does not however provide selective support for the misattribution theory. Logically, the fact that the effect can be eliminated by emphasizing the correct source of the affect offers no evidence for how the effect occurs in the first place, when this manipulation is absent. Indeed, research suggests that affect congruence due to affect-priming mechanisms can also be easily reversed simply by asking subjects to pay greater attention to their internal states (Berkowitz et al. 2000).

In a further criticism of the affect-as-information model, Martin (2000) showed that the informational value of affective states is rarely if ever static. Rather, the informational value of a prevailing affective state is always configural and depends on the particular situational context. Thus, a positive mood may inform us that a positive response is appropriate if the setting happens to be a cabaret, but the same mood may send exactly the opposite informational signal in a different setting (e.g., a funeral). The model also fails to consider how informational cues other than affect – such as actual stimulus details, relevant memories, etc. are combined to produce a response. In a sense, the inferential affect-as-information theory is really a theory of mistaken or aborted responses. Realistic, complex and involving tasks inevitably call for more elaborate memory-based processing where inferring a simple response from a mistakenly attributed affective state is unlikely to provide a satisfactory outcome.

The Processing Consequences of Affective States

So far we have considered the informational role of affect, how it may influence the *content* and valence of memories, judgments and inferences. Affect may also influence the *process* of cognition, that is, *how* people think (Clark and Isen 1982; Bless and Fiedler 2006). Early studies suggested that people experiencing positive affect may employ less effortful and more superficial processing strategies, reach decisions more quickly, use less information, avoid demanding, systematic thinking, and be more confident about their decisions. In contrast, negative affect was thought to trigger a more effortful, systematic, analytic and vigilant processing style (Clark and Isen 1982; Schwarz 1990).

The observed processing consequences of affect were originally explained in terms of affect-imposed processing limitations (Ellis and Ashbrook 1988) or motivational factors (Clark and Isen 1982). For example, happy people may try to maintain this pleasant state by refraining from effortful activity such as elaborate information processing. In contrast, negative affect may motivate people to engage in more effortful, vigilant processing in an attempt to overcome an aversive state. For example, in his "cognitive tuning" account, Schwarz (1990) argued that positive and negative affect have a signaling or tuning function and they automatically inform the person of whether a relaxed, effort minimizing (in positive affect) or a vigilant, effortful (negative affect) processing style is required. Negative affect may also trigger specific motivational processes designed to improve mood (mood repair) (Clark and Isen 1982), a process that may have important legal consequences, for example, in jury decision making. These explanations are consistent with evolutionary ideas about the adaptive functions of affect (Forgas et al. 2007; Frijda 1986).

More recent studies also show however that positive affect, rather than simply reducing processing effort, can sometimes produce distinct processing advantages. Happy people are more likely to adopt a creative, open thinking style, use broader categories, show greater mental flexibility and can perform more effectively on secondary tasks (Bless 2001; Fiedler 2001).

In a recent integrative theory Bless (2001; Bless and Fiedler 2006) and Fiedler (2001; Fiedler and Bless 2001) proposed a more comprehensive explanation of affective influences on information processing. They suggested that positive and negative affect trigger *equally* effortful, but *qualitatively* different processing styles. Drawing on the terminology introduced by Piaget, they argue that positive affect promotes a more *assimilative*, schema-based, top-down processing style, where pre-existing ideas, attitudes and representations dominate information processing. In contrast, negative affect produces a more *accommodative*, bottom-up and externally-focussed processing strategy where attention to situational information drives thinking (Bless 2001; Fiedler 2001).

The assimilative-accommodative processing dichotomy appears to capture very well the adaptive, functional consequences of positive and negative affective states. There are now a growing number of experiments that show that individuals induced

into good or bad moods do in fact process information differently, consistent with the predictions of the model. The most interesting – and to some extent, counterintuitive – prediction of Bless and Fiedler's (2006) theory is the expectation that negative affective states will often result in superior processing outcomes. This should be the case whenever the task requires more careful attention to external situational details to achieve a successful response. As we shall see, the evidence now supports the idea that those in a negative mood have more accurate and reliable eyewitness memories, make fewer mistakes when identifying deception, are generally more skeptical, and are less likely to succumb to common judgmental errors. All of these effects are likely to be beneficial in legal and forensic settings.

Integrative Theories: The Affect Infusion Model

As we have seen, affect may thus influence both the *content*, and the *process* of how people think. However, these effects are subject to important boundary conditions. Recent integrative theories such as the Affect Infusion Model (AIM; Forgas 2002) seek to link the informational and processing effects of mood and attempt to specify the circumstances that facilitate or inhibit affect infusion into cognition and behavior. For example, affect priming is most reliably observed when cognitive tasks call for highly constructive processing that necessitates the use of memory-based information. Similarly, the inferential affect-as-information model is only likely to be used in circumstances that promote heuristic processing, as people lack the motivation, ability or resources to deal with a task more exhaustively.

The AIM predicts that affective influences on cognition depend on the processing styles recruited in different situations that can differ in terms of two features: the degree of *effort*, and the degree of *openness* of the information search strategy. By combining processing quantity (effort) and quality (openness, constructiveness), the model identifies four distinct processing styles: *direct access processing* (low effort, closed, not constructive), *motivated processing* (high effort, closed, not constructive), *heuristic processing* (low effort, open, constructive), and *substantive processing* (high effort, open, constructive). Affect infusion is most likely when constructive processing is used, such as substantive or heuristic processing. In contrast, affect should not infuse thinking when motivated or direct access processing is used. The AIM also specifies a range of contextual variables related to the *task*, the *person*, and the *situation* that influence processing choices and thus affective influences.

Finally, the AIM also recognizes that affect itself has a significant influence on information processing strategies, consistent with the assimilative/accommodative distinctions proposed by Bless and Fiedler (2006). We shall next turn to reviewing a series of recent empirical studies that demonstrate the processing consequences of positive and negative affective states on the performance of tasks that are of direct relevance to legal and forensic practice, such as eyewitness memory, the detection of deception and judgments of guilt, social judgments, stereotyping and persuasive communication.

Empirical Evidence for the Benefits of Negative Affect

As we have seen in the previous sections, there are good evolutionary and psychological reasons to assume that mild negative affect, such as temporary sadness, far from being just an unpleasant experience, can also produce distinct cognitive and interpersonal benefits. Such effects are likely to play a particularly important role in legal and forensic settings where remembering, interpreting, inferring and judging complex issues is part of the daily work of forensic professionals, and is of critical importance to lay participants in the legal process such as defendants and witnesses (Wiener et al. 2006). Let us now turn to reviewing the growing empirical evidence supporting the contention that mild dysphoria can produce benefits for thinking and judgments.

Early evidence for the possible cognitive benefits of negative mood comes from an interesting study by Sinclair and Mark (1992), who found that sad mood may improve the accuracy of person perception judgments, as reliance on heuristic shortcuts such as primacy effects are more common in a happy mood and less common in negative mood. Those in negative mood were less influenced by primacy manipulations, and consequently paid more balanced attention to both positive and negative information in their impressions.

Circumstantial evidence for the possible benefits of not being too happy also comes from research by Parrott (1993). It seems that when happy people expect to participate in a difficult and demanding interpersonal task, such as interacting with a stranger, they will spontaneously undertake activities designed to reduce their positive affect. In this study, those feeling good but anticipating a demanding and difficult interaction preferred to selectively read sad rather than happy articles, in an apparent attempt to calibrate their mood (Parrott 1993). Thus, it seems that, consistent with the argument that negative affect may confer processing advantages, people do seem to spontaneously adopt strategies designed to reduce euphoria when expecting to face a difficult social situation (Erber and Markunas 2006).

Of course, we are not suggesting here that the kind of accommodative processing promoted by negative affect will *always* improve performance. Whether negative or positive mood helps performance depends largely on the cognitive demands of the task. When assimilative processing is most appropriate to the task (such as the use of heuristics, reliance on past knowledge, making quick inferences, and tasks requiring mental flexibility and creativity), it is positive mood that should improve performance. In contrast, when accommodative processing is called for (such as paying close attention to new information, monitoring the environment, dealing with concrete rather than abstract information, etc.), it will be negative affect that produces benefits. For example, Ambady and Gray (2002) found that sadness and depression impaired people's ability to correctly interpret brief cues predictive of social behaviors, suggesting that it is positive affect that is most likely to facilitate quick, snap judgments based on truncated information, whereas negative mood interferes with such heuristic processing and is more likely to help detailed, accommodative processing.

In the following sections we will review a number of experiments that demonstrate the adaptive consequences of negative affect in a variety of areas such as (1) eyewitness memory, (2) detection of deception and inferences of guilt, (3) judgmental errors, (4) stereotyping, and (5) the quality and effectiveness of persuasive messages produced.

The Benefits of Negative Affect for Eyewitness Accuracy

Remembering the details of incidentally observed everyday scenes can be of crucial importance in legal and judicial practice and in courtroom procedure. The legal system accords eyewitness testimony (as distinct from hearsay) special evidentiary status, based on the implicit assumption that events that are personally witnessed are able to be remembered accurately and without major distortion. In fact, pioneering work by Elizabeth Loftus (1979; see also Chap. 6, this volume) has done much to qualify this assumption. A large number of carefully controlled experiments now show that eyewitness memory can be relatively easily corrupted by the incorporation of subsequently received false information. Within the paradigm introduced by Loftus (1979), three stages of the eyewitness memory process are studied: (1) exposure to the target event (encoding), (2) interference when misleading information is surreptitiously provided later on, and (3) the final recall (or recognition) of the target event. There is very strong evidence that misleading information received at stage 2 is frequently incorporated into the memory and is later mistakenly reported as part of the original scene (see Laney and Loftus this volume). It is interesting that the influence of affective states on eyewitness accuracy has not been investigated previously, despite strong evidence at least since the 1980s that affect does play an important role in many memory processes (Bower 1981; Forgas and Bower 1987).

Can Bad Weather Improve Eyewitness Memory?

In a recent field experiment we asked a very simple question (see also the introductory example in this chapter): would eyewitness memory for incidentally encountered objects in a real-life setting such as a shop, be influenced by temporary mood? There is good evidence that weather can be an important source of affective variations, so we decided to rely on the weather as the principal mood induction method. Participants were unsuspecting shoppers who entered a suburban Sydney news agency to buy items such as newspapers, stationery, cards or small gift items. The mood induction consisted of two components. The study was carried out on windy, cold, rainy days (negative mood), and warm, sunny bright days (positive mood). In order to further reinforce the weather-induced mood state, we also played mood-inducing music within the shop. In the happy condition the music repertoire consisted of cheerful, upbeat classical pieces (e.g., Bizet's Carmen suite, excerpts from

Gilbert and Sullivan, etc.). In the negative mood condition the repertoire contained slow, downbeat pieces such as Chopin, and the requiems by Mozart and Verdi.

The target objects to be remembered were ten small ornamental items casually displayed on the check-out counter, such as matchbox cars, small plastic animal figures, a toy gun, etc. These trinkets were somewhat unusual in a shop environment, but they were not completely out of place in a small family shop either. Shoppers were exposed to the target items on average for less than 60 s while they were waiting to pay for their purchases. After leaving the shop, randomly selected shoppers were approached by a research assistant and asked to complete a brief questionnaire testing their cued recall, and recognition memory for the target items, and their mood state was also assessed. Results showed that those in a dysphoric mood on unpleasant days both remembered, and recognized significantly more items correctly than did people in a happy mood on a bright, sunny day (see Fig. 2.1). We also ascertained that this effect was not due to people simply spending longer in the shop on rainy days: in fact the average time shoppers spent in the shop, and at the check-out counter on rainy and sunny days was the same (Forgas, Goldenberg & Unkelbackh, 2009).

Despite growing interest in affect and cognition in recent years (Bless and Fiedler 2006; Bower and Forgas 2001; Eich and Macauley 2000; Forgas 2002), this study was the first to show in a real-life setting that weather-induced mood can have a significant influence on people's ability to remember casually observed scenes. The results support recent affect-cognition theories that predict that good and bad moods should selectively promote *assimilative* and *accommodative* thinking styles (Bless and Fiedler 2006; Fiedler 2001; Forgas 2002). The findings are also conceptually consistent with other experiments showing that negative mood seems to improve

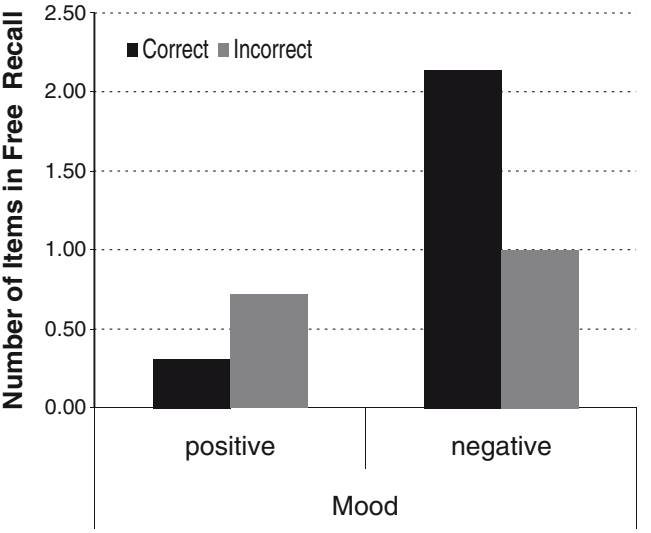

Fig. 2.1 The effects of good or bad mood, induced by the weather, on people's ability to recall items casually seen in a shop. (After Forgas, Goldenberg & Unkelback, 2009.)

attention to concrete, external information (Fiedler et al. 1991; Forgas 1998, 2007). Although we could not collect direct processing measures in a field setting, given the conceptual consistency of our results with prior laboratory work, the results seem most consistent with theories that predict that negative mood promotes an accommodating, externally focused processing style. The results specifically confirm Fiedler et al.'s (1991) prescient suggestion that "good mood can be predicted to produce more false alarms in eyewitness reports" (p. 376), essentially reducing memory accuracy and increasing false positive identifications, exactly the result we obtained here. Given the limits of a field study, we could not separate encoding and retrieval effects, an issue that certainly deserves attention in future studies.

Remembering incidental details in a complex situation is especially important in legal and forensic settings. Our results suggest that some allowance for such mood effects could be incorporated in applied domains such as legal procedure and courtroom practice. However, as these mood induced processing effects appear largely subconscious and unintended, people may have little meta-cognitive awareness or indeed, control over mood effects on their thinking (Forgas et al. 2005; Nisbett and Wilson 1977). It is important to note that despite disproportionate emphasis on the beneficial consequences of positive mood in recent applied psychology, our findings add to the growing number of studies showing that negative moods can produce a variety of cognitive benefits in real-life situations (Forgas 1998, 2002).

Negative Mood as a Defense Against Eyewitness Memory Distortions

In another recent series of experiments (Forgas et al. 2005), we looked at the possibility that positive affect may increase, and negative affect decrease the tendency that people incorporate subsequently encountered false details into eyewitness memories. While the previous study looked at mood effects on eyewitness accuracy at stage (1), when the event is first witnessed (the encoding stage) , the following studies investigated mood effects at stage (2), when misleading information is encountered later on (the post-event stage).

Based on the theories predicting a mood-induced dichotomy on assimilative /accommodative processing (Bless and Fiedler 2006; Fiedler 2001; Forgas 2002), we expected that bad moods should reduce, and good moods should increase the incorporation of false information into eyewitness memory. In the first experiment ($N=96$), participants viewed pictures showing a car crash scene (negative event), and a wedding party scene (positive event). One hour later, allegedly as part of an unrelated study, they received an autobiographical mood induction (recalled happy or sad events from their past), and then completed a short questionnaire about the scenes that either contained, or did not contain. misleading information (e.g., set in *italics* here: "Did you see the overturned car next to the *broken guard rail*?", "Did you see the fireman *holding a fire hose*?"). After a further 45-min interval filled with other tasks, the accuracy of their eyewitness memory for the scenes was tested. As predicted, and as also found in numerous studies by Loftus and others (see chapter by Laney and Loftus this volume), exposure to misleading information

significantly reduced eyewitness accuracy. However, we also found that positive mood significantly increased, and negative mood decreased this tendency. In fact, negative mood almost completely eliminated this common "misinformation effect." A signal detection analysis confirmed that experiencing bad mood when exposed to false, misleading details significantly improved and positive mood impaired eyewitness memory performance.

A staged real-life incident was the recall target in a second experiment ($N = 144$). Students in a lecture theatre witnessed a staged 5-min aggressive encounter between a lecturer, and a female intruder, who pushed into the lecture theatre and engaged in an animated, emotional interaction with the lecturer in front of over 200 student witnesses before leaving (Forgas et al. 2005, Expt. 2). One week later eyewitnesses to this episode received a mood induction (viewed short 10-min video-films), and then were given a brief questionnaire about the lecture room episode that contained planted, misleading information (set in *italics* here: "Did you see the lecturer removing his microphone, as the woman *wearing a light jacket* moved towards him?", "Can you remember the young woman fiddling with her scarf as the lecturer *gave her something from his wallet*?").

After a further 45-min interval, the accuracy of their eyewitness memory for the episode was assessed. Those who were in an induced positive mood while receiving the misleading information were significantly more likely to incorporate these details into their eyewitness memory and subsequently to report it as true (see Fig. 2.2). In contrast, negative affect seems to have all but eliminated this source of error in eyewitness memory. Signal detection analyses confirmed that negative affect improved eyewitnesses' ability to discriminate between correct and misleading details. Paradoxically, those in the positive mood, although actually markedly less accurate, were in fact more confident in their accuracy, suggesting that there was no meta-cognitive awareness of these mood effects.

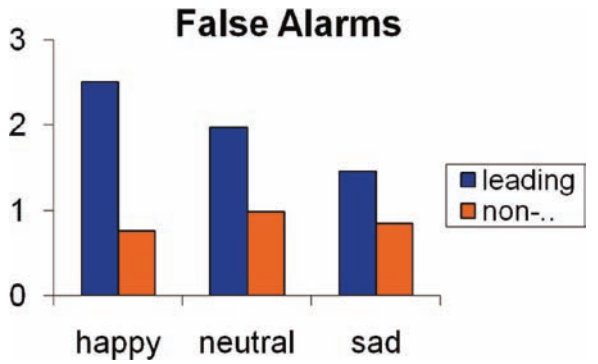

Fig. 2.2 The interaction between mood and the presence or absence of misleading information on recognition (Expt. 2): positive mood increased, and negative mood decreased the influence of misleading information on subsequent eye-witness reports (false alarms). (After Forgas et al. 2005.)

To what extent is it possible to *suppress* such mood effects when instructed to do so? Within legal and judicial practice, explicitly warning people to disregard certain pieces of evidence, or not to take into account details deemed to be unreliable, is standard practice. Such instructions by judges and others are based on the implicit assumption that people are willing, and able to act on them. However, we know from other research in social psychology that people often have poor insight into, and negligible control over their own cognitive processes (Nisbett and Wilson 1977). Given that the mood effects we demonstrated here were largely automatic and subconscious, we predicted that verbal instructions to suppress them are unlikely to be effective.

In our third study, participants ($N=80$) saw 5-min videotapes showing (a) a robbery in a convenience store, and (b) a wedding scene. After a 45-min interval they received an audiovisual mood induction and then completed a short questionnaire that either did, or did not contain misleading information about the events. Some participants were additionally instructed to "disregard and control their affective states". Finally, the accuracy of their eyewitness memory for the two events was tested. Participants also completed the Snyder Self-monitoring Scale and the Crowne–Marlowe Social Desirability Scale during a separate testing session at the beginning of the semester to explore whether individual difference variables, such as self-monitoring and social desirability, may play a role in mediating the predicted mood effects.

Results showed that exposure to misleading information again reduced eyewitness accuracy, and did so most when people were in a happy rather than a sad mood. A signal detection analysis further confirmed the beneficial effects of negative affect in reducing distortions and so improving memory performance. As anticipated, instructions to control affect did not reduce this mood effect, but rather, produced an overall conservative response bias. Interestingly, individuals who scored high on self-monitoring and social desirability were better able to suppress mood effects when instructed to do so than were others, as such individuals are presumably more conscious and aware of their internal states and how they appear to others, and may have learnt to better monitor and manage their affective states.

These three experiments offer convergent evidence that negative moods can have significant and desirable adaptive effects on cognitive performance, by reducing people's susceptibility to misleading information and thus improving eyewitness accuracy. Paradoxically, happy mood resulted in reduced eyewitness accuracy yet increased confidence, suggesting that people were entirely unaware of the subconscious consequences of their mood states for their thinking and memory. Instructions to suppress affect were generally ineffective, except for some participants who scored particularly high on self-monitoring, and social desirability. These results are largely consistent with affect-cognition theories that predict that good and bad moods have an asymmetric effect on information processing strategies and outcomes (Bless 2001; Fiedler and Bless 2001; Forgas 1995, 2002). Within a broadly evolutionary framework to social cognition discussed earlier, our results suggest that both good and bad moods can have a significant impact on eyewitness memories, due to the kind of information processing strategies they promote. These findings may

have a number of applied implications for forensic, organizational and clinical psychology (see also Laney and Loftus this volume).

Is This True…? Mood Effects on the Detection of Deception

Few judgments are more important in legal, policy and forensic work than deciding whether somebody is telling the truth or not. How much skepticism should investigators, prosecutors, or judges exercise when inferring the truth or otherwise of obviously self-serving testimonies from defendants? More generally, how do we know if much of the information we come across in everyday life is true or false? Much of what we know about the world is second hand knowledge. Deciding whether to accept or reject social information is a critical decision in everyday life. Accepting invalid information as true (false positives, excessive gullibility) can be just as dangerous as rejecting information that is valid (false negatives, excessive skepticism). Credibility judgments can be influenced by a variety of factors, such as information quality, prior knowledge and heuristic cues such as source characteristics and attractiveness (e.g., Petty et al. 2001).

In several recent experiments we found that moods also have a significant influence on people's tendency to accept or reject doubtful information. Many claims can potentially be evaluated against objective evidence. For example, trivia questions, urban myths and rumors are in principle open to checking, but are in practice difficult to test (e.g., power lines cause leukemia; AIDS originated in Cameroon; the CIA murdered Kennedy, etc.). Within a forensic environment, a number of statements also fall within this category. A second kind of skepticism, *interpersonal skepticism*, concerns the acceptance or rejection of interpersonal messages about internal states that are by their very nature ambiguous and not open to objective validation. For example, deciding whether a verbal denial of wrongdoing is true or false, whether a facial expression or a smile is genuine or not involves this kind of interpersonal credibility judgment.

In several experiments we found that induced mood states do have a significant influence on both kinds of credibility judgments, (a) the acceptance or rejection of factual claims (*factual skepticism*), and (b) the acceptance or rejection of preferred interpersonal representations (*interpersonal skepticism*) (Forgas and East 2008a,b).

Mood Effects on Factual Skepticism

In one study we asked participants who were induced into positive, neutral and negative moods by watching affect-inducing videotapes to judge the probable truth of a number of apparently factual claims that could not be readily tested – in fact, urban legends and rumors. Results showed that as expected, mood did have a significant influence on skepticism, but only for claims that were new and not previously encountered by respondents, suggesting that familiarity is an important moderator

of mood effects on skepticism. A follow-up experiment explicitly manipulated the familiarity of a variety of factual claims taken from trivia games. Some were familiar (presented to judges several weeks before), and some were entirely new. Participants ($N = 135$) induced into a positive or negative mood by watching affectively laden videos judged previously seen items as more credible, and happy mood significantly increased the tendency to accept familiar items as true. Negative mood in turn produced greater skepticism, consistent with the hypothesis that negative affect triggers a more externally focused and accommodative thinking style (Forgas and East 2008b).

Is it possible that mood may also influence credibility judgments even when previous exposure to the same factual claims also includes explicit feedback about their actual truth or falsity? In one experiment participants ($N = 118$) judged the truth of 25 true and 25 false general knowledge trivia statements, and were also told subsequently whether each item was true or not. Two weeks later, after a positive or negative mood induction, they again rated the credibility of some familiar statements from the earlier session, as well as some completely new statements.

Results showed that only participants experiencing a sad mood were able to correctly distinguish between true and false claims they had seen previously. Happy mood participants in contrast were more likely to rate all previously seen, familiar claims true, even if they were told previously that the information was false. This pattern confirms that happy mood increased and sad mood reduced judges' tendency to rely on the "what is familiar is preferred" heuristic (Zajonc 1980). Negative mood in contrast again conferred a significant adaptive advantage by promoting a more accommodative, systematic processing style (Fiedler and Bless 2001). Overall, negative mood increased, and positive mood decreased the degree of skepticism people displayed when assessing the truth of ambiguous factual claims. This effect seems consistent with the theoretical prediction developed earlier that negative mood should reduce reliance on heuristic information, such as the tendency to use perceived familiarity as an indication of truthfulness in this case.

Mood Effects on Interpersonal Skepticism

In addition to judging the validity of various apparently factual claims, forensic investigations also heavily rely on determining the likely truthfulness or otherwise of statements by witnesses and defendants. Mood in general may also influence people's tendency to accept or reject interpersonal communications as genuine or false. In terms of the theories discussed above, negative moods might produce overall more critical and skeptical judgments (i.e., elevate the threshold of accepting communications as valid), and may also confer a selective advantage, increasing sad judges' ability to discriminate between deceptive and truthful communications. In contrast, those in a positive mood may be inclined to scrutinize communications in less detail, and accept interpersonal messages at "face value," as genuine and trustworthy.

In one experiment investigating this possibility, we asked participants feeling happy and sad after receiving manipulated feedback about their performance on a bogus cognitive task ($N=90$) to judge the genuineness of people displaying positive, neutral and negative facial expressions (Forgas and East 2008, Expt. 1). As predicted, those in a negative mood were significantly less likely to accept facial expressions as genuine than those in the neutral or happy condition. Curiously, happy participants were more confident in their judgments about the genuineness of the facial expressions than were the other groups. In another study instead of positive and negative facial displays, the six basic emotions were used as targets (i.e., anger, fear, disgust, happiness, surprise and sadness; Ekman 1972). Once again, negative mood reduced, and positive mood increased people's tendency to accept the facial displays as genuine, consistent with the more attentive and accommodative processing style associated with negative moods (Forgas and East 2008, Expt. 2).

Mood Effects on the Detection of Deception

Do these mood effects also occur in realistic situations involving both verbal and nonverbal communication? In particular, when an accused is denying having committed a transgression, such as a theft, are happy or sad judges more likely to believe their denials? Further, does transient mood influence judges' ability to detect deception, in other words, to judge deceptive denials as false? To explore this possibility, we asked happy or sad participants to accept or reject the videotaped statements of targets who were interrogated after a staged theft, and were either guilty, or not guilty (Forgas and East 2008b). The targets were instructed to either steal, or leave in place a movie pass in an empty room, unobserved by anyone, and then deny taking the movie ticket in a subsequent videotaped interrogation. So some targets were lying and some were telling the truth when denying the theft.

The observers' mood did have a significant influence on their judgments. Judges in a positive mood were more likely to accept denials as truthful. Sad judges in turn made significantly more guilty judgments, and were significantly better at correctly detecting deceptive (guilty) targets (see Fig. 2.3). Negative affect thus produced a significant advantage at accurately distinguishing truths from lies in the observed interviews. A signal detection analysis also confirmed that sad judges were more accurate in detecting deception (identifying guilty targets as guilty) than were neutral or happy judges, consistent with the predicted mood-induced processing differences.

In summary, negative affect seems to increase skepticism both about factual, and about interpersonal messages, and those in a negative mood were also significantly better able to detect deception. These results are conceptually consistent with recent affect-cognition theories showing that negative affect generally produces a more situationally oriented, accommodative and inductive cognitive style that provides an adaptive advantage when it comes to accurately detecting deception. This conclusion is also consistent with some earlier claims about "depressive realism," and recent research by Lane and DePaulo (1999), who found that dispositionally

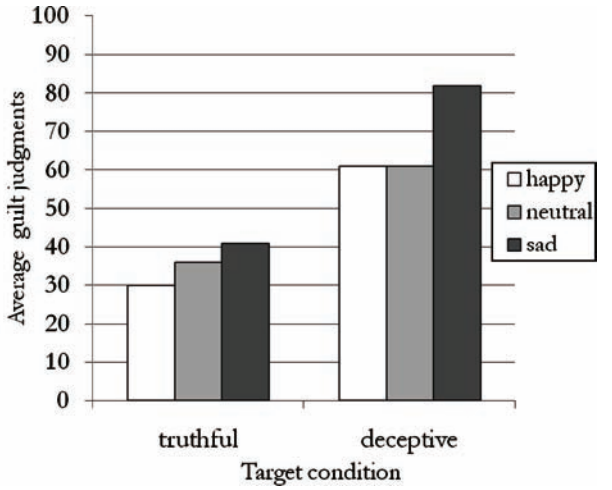

Fig. 2.3 The effects of mood and the target's veracity (truthful, deceptive) on judgments of guilt of targets accused of committing a theft (average percentage of targets judged guilty in each condition). (After Forgas and East 2008.)

dysphoric individuals might have an advantage at detecting specific types of lies, such as false reassurances. These findings are particularly relevant to legal and forensic practice, where precisely these kinds of judgments need to be made on a regular basis. Of particular interest is the finding that negative mood, in addition to increasing overall skepticism, is capable of actually improving judges' ability to selectively distinguish between truthful and deceptive denials.

Negative Affect Reduces Some Judgmental Errors

Forming social judgments and interpreting the behavior of others is a critical and demanding cognitive task in everyday life (Heider 1958), and is an essential part of the legal process. However, such inferential judgments are also subject to a number of well-established errors and distortions. Perhaps the best known of these errors is the fundamental attribution error (FAE) or correspondence bias. This refers to a pervasive tendency by people to see intentionality and internal causation and underestimate the impact of situational forces in their judgments of others (Gilbert and Malone 1995). The FAE largely occurs because, all things being equal, observers pay disproportionate attention to the most conspicuous and salient information in the focus of their attention – the actor – and fail to adequately process information about situational constraints (Gilbert 1991). If the detailed processing of situational information is facilitated, for example, by a negative mood state, then we might expect that the incidence of the FAE may be reduced.

In several experiments we explored the intriguing possibility that good moods can increase, and bad moods can reduce the FAE (Forgas 1998). There is some earlier work suggesting that mild mood states can in fact have an informational influence on attribution strategies. For example, happy persons tend to identify stable, internal causes when doing well, and blame unstable, external causes for doing badly in achievement situations (Forgas et al. 1990). In contrast, sad people make more internal and stable attributions for their failures than for their successes. Moods can even influence explanations for deeply involving events, such as the way people interpret and judge various relationship conflicts with their intimate partners (Forgas 1994).

In these experiments we expected that the more accommodative processing promoted by negative mood should facilitate the more careful interpretation of situational information, making judges more aware of situational constraints impacting on the actor, and so reduce the incidence of incorrect internal attributions (Gilbert and Malone 1995). Further, in terms of Jones and Davis' (1965) theory of correspondent inferences, these mood effects should be most pronounced when the tendency to make incorrect internal attributions is greatest, for example, when the behavior of the actor is particularly informative and salient as it deviates from popular expectations.

In the first experiment in this series, happy or sad participants ($N=96$) were asked to read and make attribution judgments about the real attitudes of the writer of an essay advocating a popular or unpopular position (for or against nuclear testing). Half of the participants were also told that the position to be argued was assigned, and the other half were informed that the position was freely chosen. Consistent with the findings of Jones and Harris (1967), we also found that essay content influenced attributions even when the essay was assigned, clear evidence of the FAE. Happy persons were more likely, and sad people were less likely than controls to commit the FAE and incorrectly infer attitude differences based on coerced essays. It seems that the accommodative processing style recruited by negative mood significantly reduced the FAE, especially when correspondent inferences could be readily based on highly salient and captivating information (such as an unpopular essay; Gilbert 1991).

What happens when we investigate these mood effects not in the sterile environment of a social psychology laboratory, but in a real-life environment? In a follow-up field study, participants ($N=120$) who were feeling good or bad after seeing happy or sad movies were approached on the street as they were leaving the movie theatres, and were asked to read and make attributions about the writers of popular and unpopular essays arguing for, or against recycling (cf. Forgas and Moylan 1987). Their responses confirmed the predicted cognitive benefits of negative mood. Once again, we found that those in a negative mood after seeing sad films were significantly less likely to commit the FAE. In other words, negative mood resulted in paying more attention to situational information. In contrast positive affect increased the incidence of the FAE, especially when the essays were highly salient because they advocated unpopular positions.

Are these effects indeed due to the more attentive processing of situational information in negative mood? In order to investigate this, happy or sad participants ($N = 84$) again made attributions based on freely chosen or coerced essays advocating popular or unpopular positions (for or against environmentalism; Forgas 1998, Expt. 3). In order to get some indication of the degree of care and attention they employed when dealing with this information, their subsequent recall of essay details was also assessed as a measure of mood-induced differences in information processing style. Results again showed that negative mood significantly reduced the incidence of the FAE, and this mood effect was especially strong when the essays advocated unpopular positions. Paradoxically, it was happy persons who were more confident in the accuracy of their judgments, when in fact they were least accurate. This suggests that judges generally had no introspective awareness of how mood may have affected their processing strategies and attributions.

Recall memory data confirmed that those in a negative mood remembered significantly more details about the target essay than did others, demonstrating a direct association between mood and the amount of processing the stimulus information received. A mediational analysis was also performed and further confirmed that processing strategy was indeed a significant mediator of mood effects on attributions. Thus, this series of studies showed that mild negative moods reduced common judgmental errors such as the fundamental attribution error and produced improved judgments, both in controlled laboratory studies and in real-life settings. These effects were directly linked to the more detailed and accommodative processing style associated with dysphoria, consistent with the suggested evolutionary benefits of negative affect in conferring cognitive advantages when dealing with complex social information. These results lend further support to the theoretical predictions and evolutionary accounts that emphasize the adaptive, functional significance of affective states. Clearly, inferential errors such as the fundamental attribution error are highly undesirable in legal and forensic decision making. The demonstration here that mild mood states have a direct influence on the incidence of judgmental mistakes should be of considerable interest to practitioners and clients who participate in the legal system (Blumenthal 2007; Wiener et al. 2006).

Negative Affect Reduces the Subliminal Use of Stereotypes

After the London bomb attacks, in a tragic mistake British police shot dead a Brazilian man who *looked* like a Muslim. Could it be that merely appearing Muslim may have become a subliminal cue facilitating such aggressive responses within forensic and judicial settings? More generally, what influence do mild positive and negative mood states have on people's tendency to rely on subliminal stereotypes when dealing members of minority groups? In one recent experiment we investigated this question by asking happy or sad people to generate rapid responses to targets that did, or did not appear to be of Muslim appearance.

It is well known that negative attitudes toward minority out-groups, such as Muslims, are notoriously difficult to assess using explicit measures, as people are often unable or unwilling to reveal such prejudices. Recent implicit measures of prejudice, such as the IAT, also turned out to be far less satisfactory than hoped (Berdik et al. 2007; Fiedler et al. 2006). However, there is another way to assess stereotyping, using disguised behavioral tasks that assess subliminal aggressive tendencies (Forgas 2003), including the recent "shooter bias" paradigm (Correll et al. 2002). When individuals have to shoot only at targets who carry a gun, US participants revealed a strong implicit bias to shoot more at Black rather than White targets, even though there was no association between being Black and carrying a gun (Correll et al. 2002, 2007).

In this study, we expected that Muslim targets are now likely to elicit a similar bias, and in a shooters' task, sad people should be less likely than happy people to rely on pre-existing stereotypes and are less likely to selectively "shoot" at Muslim rather than non-Muslim targets. There is some precedence for using unobtrusive behavioral measures to assess negative stereotypes. For example, honking by car drivers (an aggressive response) is more likely when obstructing vehicles display disliked rather than neutral or liked national or other insignia (Forgas 1976, 2003).

The experiment used a modified version of Correll et al.'s (2002) shooter game. Participants were instructed to shoot at targets appearing on a computer screen only when they were carrying a gun. In fact, we used morphing software to create matched targets who did, or did not, appear Muslim. We did this by manipulating highly salient visual cues denoting Muslim identity such as wearing a turban or the hijab. Muslim head dress is considered sufficiently controversial in some countries such as Turkey or France to call for formal regulation restricting its use. Muslim headgear is also closely associated with terrorists, and the iconic turban is a key part of the public image of most terrorists such as Bin Laden. Accordingly, we expected people to shoot more at targets with Muslim headgear, and we expected this effect to be reduced by negative mood, but increased by positive mood.

Participants were 66 students from a Sydney university who were induced into positive or negative mood by receiving positive or negative feedback from a partner they expected to meet later on. They were then shown in rapid succession a number of Muslim or non-Muslim targets who either held a gun, or held a similar object (e.g., a coffee mug; see Fig. 2.4). Results showed a significantly greater tendency overall to shoot at Muslims rather than non-Muslims (see Fig. 2.5). Using an automatic behavioral measure of stereotyping, this result confirms the existence of a strong negative stereotype associated with Muslim appearance. It is particularly interesting that this effect could be demonstrated with otherwise liberal and tolerant Australian undergraduates, who would be most unlikely to explicitly espouse negative stereotypes about Muslims. As Australia has not been subject to Muslim terrorist attacks on its territory, we may expect that other countries in the forefront of Muslim terrorism such as the USA and Britain may show an even stronger "turban effect" than the one we demonstrated here.

Fig. 2.4 The turban effect: stimulus figures used to assess the effects of mood and wearing or not wearing a turban on subliminal aggressive responses. Participants had to make rapid shoot/don't shoot decisions in response to targets who did or did not hold a gun, and did or not wear a Muslim head-dress (a turban)

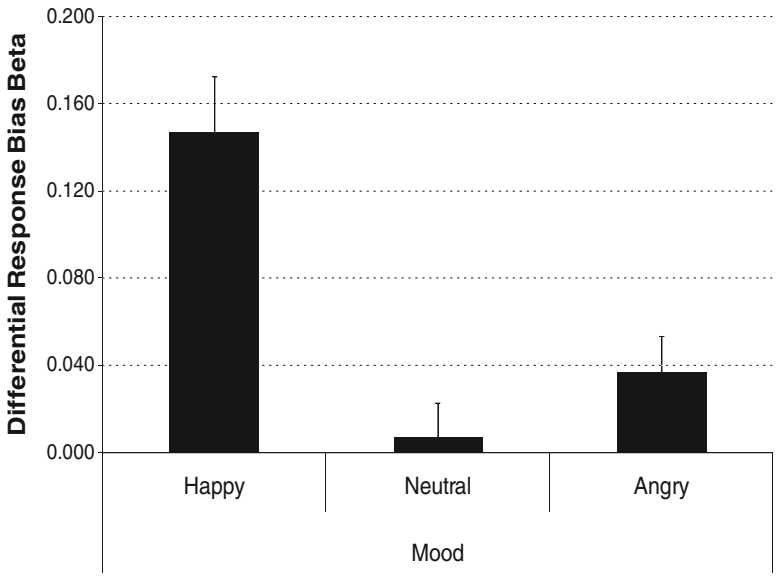

Fig. 2.5 The effects of positive and negative mood on people's reliance on stereotypes in the shooters' bias task: those in a positive mood were more likely, and those in a negative mood were less likely to selectively shoot at targets wearing a turban

The most intriguing finding here is that induced negative mood reduced the tendency to selectively shoot at Muslim rather than non-Muslim targets. Positive affect triggered a significant *selective* bias against Muslims, consistent with recent theories suggesting that positive affect promotes top-down, assimilative processing that facilitates the influence of stereotypes on subliminal responses (Bless and Fiedler 2006; Forgas 1998, 2007). Negative mood in turn, as predicted, reduced people's tendency to rely on automatic stereotypes when responding to this task.

Using a behavioral measure of subliminal aggressive responses, this experiment was one of the first to show that negative mood reduces, and positive mood increases stereotype-based aggressive responses to Muslim targets. It is interesting that even usually tolerant university students will act in ways that reveal a strong subliminal negative bias towards Muslims. It is reasonable to assume that policemen, lawyers, judges and forensic professionals may well display a similar automatic tendency to stereotype more when happy, and stereotype less when in a negative mood.

The Benefits of Negative Mood for Strategic Communication

Could negative affect also confer identifiable benefits when it comes to effective interpersonal communication, such as the production of persuasive messages? Presenting convincing arguments is a critical component of adversarial proceedings in the judicial system, and attempts at persuasion are also an important aspect of communication at every level of the legal system. Despite extensive research on responding to persuasion (Petty et al. 2001) there has been little work on how such messages are produced. What role does everyday mood play in the production of persuasive messages? It may be expected that accommodative processing promoted by negative affect should produce more concrete and factual thinking and result in the production of superior persuasive messages. This prediction is also consistent with much early theorizing about rhetorical effectiveness going back to Aristotle (Cooper 1932), as well as psychological research suggesting that "expository information that is concrete … tends to be interesting and well recalled" (Sadowski 2001, p. 263).

We looked at this possibility in a series of recently published experiments (Forgas 2007). In the *first experiment* in this series (Forgas 2007, Expt. 1), participants ($N=59$) received an audiovisual mood induction, and were then asked to produce persuasive arguments for or against an increase in student fees, and Aboriginal land rights. They produced an average of seven arguments, and each argument was rated by two raters blind to the manipulations for overall quality, persuasiveness, level of concreteness, and valence (positive-negative). Results showed that those in a negative mood produced arguments on both issues that were of significantly higher quality and were judged to be more persuasive than the arguments produced by happy participants. This mood effect was largely due to the greater specificity and concreteness of arguments produced in a negative mood. A mediational analysis confirmed that it was mood-induced variations in argument concreteness that influenced argument quality.

In a further experiment, happy or sad participants ($N=125$) were asked to produce persuasive arguments on two political issues, for or against Australia becoming a republic, and for or against a radical right-wing party. Two raters ($r=0.91$) assessed each argument in terms of (a) persuasiveness and argument quality, (b) valence (the use of positive or negative contents), and (c) self-relevance (the extent to which participants used personal, self-relevant themes). Sad mood again resulted in higher quality and more persuasive arguments (see Fig. 2.6), consistent with the theoretical prediction that negative mood should promote a more careful, systematic, bottom-up processing style that is more attuned to the requirements of a particular situation (Bless 2001; Bless and Fiedler 2006; Fiedler 2001; Forgas 2002). However, there is a world of difference between arguments rated "persuasive" by trained raters, and arguments actually producing real attitude change in real persons exposed to those arguments. So the ultimate significance of these findings depends on whether the arguments produced by happy and sad participants indeed differ in actual persuasive power, as distinct from ratings of persuasiveness produced by trained raters.

In Expt. 3 the arguments produced by happy or sad participants were presented to a naïve audience of 256 undergraduate students. Their baseline attitudes on the four issues were assessed at the beginning of the term. After reading one of the pro- or contra persuasive arguments on one of the issues written by one of the happy or sad participants in Expts. 1 and 2, their attitude on all four issues was again assessed. Observed changes in attitudes in response to the persuasive arguments

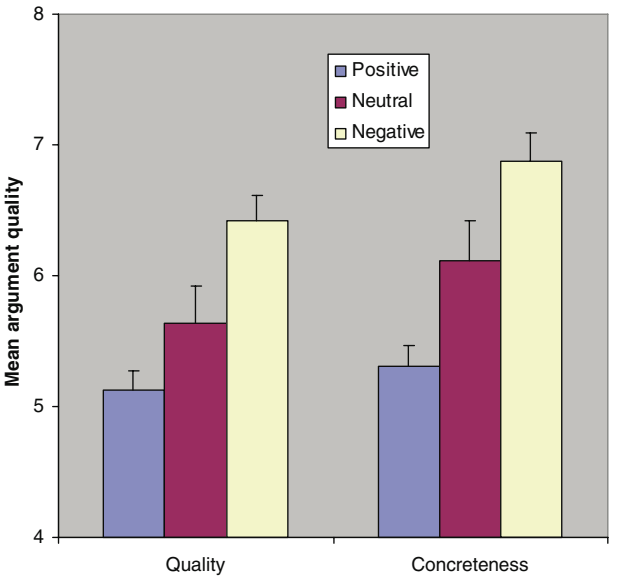

Fig. 2.6 Mood effects on the quality and concreteness of the persuasive messages produced: negative affect increases the degree of concreteness of the arguments produced, and arguments produced in negative mood were also rated as more persuasive. (After Forgas 2007, Expt. 2.)

were assessed against the baseline measurement obtained earlier. Results showed that arguments written by negative mood participants in Expts. 1 and 2 were significantly more successful in producing a real change in attitudes than were arguments produced by happy participants. Attitudes were also more likely to change when the arguments advocated a popular rather than an unpopular position, and negative mood arguments were especially successful in producing attitude change when they advocated a popular position.

What happens when persuasive arguments are presented in an interpersonal context, as is usually the case in interactions prior to and during criminal and civil trials? Do people in a negative mood still produce more effective and more persuasive communications? In a further experiment (Forgas 2007, Expt. 4) persuasive attempts by happy and sad people were directed at a "partner" to volunteer for a boring experiment using e-mail exchanges to convince them. The motivation to be persuasive was also manipulated by offering some participants a significant reward if their persuasive attempts were successful (movie passes). Mood again had a significant effect on argument quality: people in a negative mood produced higher quality persuasive arguments than did the neutral group, who in turn did better than the positive group. However, the offer of a reward reduced mood effects on argument quality, confirming a key prediction of the Affect Infusion Model (Forgas 1995, 2002), that mood effects on information processing – and subsequent social influence strategies – are strongest in the absence of motivated processing. A mediational analysis was also performed to test the theoretical prediction that it was indeed mood-induced variations in accommodative processing and argument concreteness that mediated mood effects on argument quality. We entered mood as the predictor variable, argument concreteness as the mediator, and argument quality as the predicted variable. Results confirmed that mood effects on argument quality were due to more accommodative thinking and more concrete arguments produced in negative mood.

This series of experiments thus extends earlier research demonstrating the benefits of negative mood on the performance of cognitive tasks such as eyewitness memory, social judgments, and stereotyping. Strategic social behaviors such as persuasive communication are also based on the same kinds of cognitive processes we looked at earlier, so it is not surprising that more accommodative, careful processing should also improve the quality of strategic communications. These studies confirm that persuasive arguments produced in negative mood are not only of higher quality as judged by raters, but are also significantly more effective in producing genuine attitude change in people. Arguments produced in negative mood were more effective, because they contained more concrete details and more factual information (Cooper 1932). Such messages are seen by people as more interesting and more memorable (Sadowski 2001). However, when motivation to be effective is already high, mood effects tend to diminish, as predicted by the Affect Infusion Model (Forgas 2002).

These results are generally consistent with other studies suggesting that negative affect typically promotes a more concrete, accommodative, externally focused information processing style that also can reduce the incidence of judgmental errors

and improve eyewitness memory (Forgas 1998; Forgas et al. 2005). This kind of concrete, accommodative thinking should also have direct benefits when it comes to the effective use of social influence strategies, such as the production of persuasive arguments, something that happens frequently in courtroom settings and in legal work. This finding may have interesting applied implications, for example in training participants in the legal system who are most likely to be involved in encounters involving persuasive communication (Forgas and George 2001). Managing successful workplace relationships and resolving personal conflicts also involve a great deal of persuasive communication, often in situations that are affectively charged (Fletcher 2002). It is an intriguing possibility that mild negative affect may actually promote a more concrete, accommodative and ultimately, more successful communication style in forensic and other environments.

Conclusions

There has been overwhelming emphasis on the alleged benefits of positive affect in the recent psychological literature. In particular, it has been argued that feeling good can produce identifiable benefits in the workplace as well as in everyday social situations (Forgas and George 2001). However, these effects are not universal, and positive affect is not always desirable (Sinclair 1988). It is now increasingly recognized that both positive and negative affective states can provide adaptive advantages, albeit in different situations. The experimental results reviewed here highlight the potentially very important beneficial consequences of negative mood in the performance of a variety of common cognitive and behavioral tasks. We have seen that people in a negative mood are less prone to judgmental errors (Forgas 1998), are more resistant to eyewitness distortions (Forgas et al. 2005), are better at detecting deception (Forgas and East, 2008b), are less likely to engage in implicit stereotyping (Unkelbach et al. in press), remember incidental details better (Forgas et al. in press), and produce higher quality and more effective persuasive arguments (Forgas 2007). Other recent work also suggests that people in a negative mood are also less likely to adopt dysfunctional self-handicapping strategies (Alter and Forgas 2007).

The performance of such tasks is extremely common, and highly important, in everyday legal decision making, policy formulation, and forensic practice. Dealing with social information is necessarily a complex and demanding cognitive task in the legal system that requires a degree of elaborate processing. The empirical studies presented here suggest that in many situations, negative affect such as sadness may increase, and positive affect decrease the quality and efficacy of cognitive processes and interpersonal behaviors. Lawyers, judges, court officials, policemen as well as witnesses and defendants frequently need to remember, interpret and judge complex information. As Blumenthal (2007; this volume) suggests, once emotional distortions in the performance of these tasks become well known and scientifically established, it is incumbent upon the legal system to introduce appropriate safeguards to

ensure that such effects are recognized and managed. In other words, a degree of "emotional paternalism" is justified in order to maintain and promote the fairness and transparency of legal processes. Perhaps one day jury instructions may also incorporate advice about the effects of mood states on thinking and behavior (Lieberman and Sales 2000). Admittedly, the experimental demonstration of the various adaptive benefits of negative affect is a fairly recent development, but one can foresee a time when these insights may be translated into practical advice to employees and clients in the legal and forensic system (Wiener et al. 2006).

Of course, one must first consider the question of just how robust and reliable these effects are. It does appear that given the consistency of the results demonstrating negative mood benefits across a number of different experiments, different populations and different mood inductions, we can be reasonably confident of the reliability and robustness of the effects identified here. We used a variety of mood induction methods (watching films, receiving positive or negative feedback on task performance, remembering positive and negative details from the past), we studied a variety of populations (students, adults, people approached in public places, shoppers), and we looked at a wide range of variables likely to be influenced by mood (naturalistic memory, eyewitness accuracy, judgmental errors, stereotyping, detection of deception, person perception, persuasive argument), and generally obtained empirically consistent and theoretically coherent results. This is not to deny the necessity of future experiments that could do more to elucidate the exact processing mechanisms involved, and that could provide additional insights into the boundary conditions that mediate and moderate mood effects on cognition and behavior (Forgas 2002). Much has been learned about the way affective states influence memory, thinking and judgments in recent years, yet not enough is known about the evolutionary mechanisms that are responsible for the way we respond to various affective states.

The Cognitive Consequences of Negative Affect: An Evolutionary Adaptation?

Our findings are broadly consistent with the notion that over evolutionary time, affective states became adaptive, functional triggers that elicited information processing strategies that were automatically tailored to the requirements of the eliciting situation. However, one recurring problem in applying evolutionary principles to understanding social cognition is that such interpretations are usually post hoc, and notoriously hard to prove. How do we really know if an experimentally demonstrated phenomenon, such as the beneficial influences of negative affect on social information processing demonstrated in these studies, is indeed an evolutionary adaptation, or merely the side effect of an adaptation, or perhaps even just error? There are some commonly accepted criteria, but no hard and fast rules.

Establishing the evolutionary roots of particular psychological effects can be very difficult. Any phenomenon claiming to be evolutionary in origin needs to be

culturally universal. Although few explicitly cross-cultural studies have so far been carried out on mood effects on information processing, there is reason to believe that these effects, as are indeed most fundamental cognitive phenomena, are not culture dependent. The convergent validation of this effect in a variety of different cognitive tasks, using a variety of mood induction procedures, and different subject populations also suggests that the effect is real and universal. Some evidence from neuropsychology, and in particular from fMRI studies, should be helpful to bolster the case for evolutionary origins, and we are currently engaged in such research.

At this point, however, we must accept that the evidence for the evolutionary nature of mood effects on thinking is not conclusively made. This is not necessarily a major problem, however, as applying an evolutionary frame of thinking to social cognitive phenomena can be beneficial in a variety of ways (Forgas et al. 2007). Taking an evolutionary perspective helps us to realize that the phenomena we study have biological roots. An evolutionary perspective also offers an important and productive link between cognitive theorizing and recent work in the neurosciences (Tooby and Cosmides 1992). Perhaps evolutionary psychology at this stage is something like a "metatheory," a way of thinking about the origins and functions of observed psychological phenomena, such as evidence for the cognitive benefits of negative affect (Ketelaar and Ellis 2000). Nevertheless, evolutionary principles help to link and integrate a variety of otherwise disconnected findings, and thus help to bring order and connectedness into our field.

Obviously the phenomena reviewed here represent just one facet of the burgeoning literature investigating affective influences on thinking and behavior in the legal system (Bornstein et al. 2007; Wiener et al. 2006). Nevertheless, the evidence presented here demonstrating the beneficial influence of negative affect for a variety of complex cognitive tasks and interpersonal behaviors should be of considerable theoretical, as well as applied relevance to everyone interested in legal, judicial and forensic psychology (Wiener et al. 2006). More generally, we hope that this chapter will stimulate further interest and add impetus to recent explorations of the influence of affective states on legal and forensic processes.

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Chapter 3
Emotional Influences on Judgments of Legal Blame: How They Happen, Whether They Should, and What to Do About It

Neal Feigenson

Introduction

Determining how people's emotions affect their judgments of legal responsibility and blame, and when, if ever, they should, is a challenging and important task. Widely accepted dual process theories of cognition (e.g., Chaiken and Trope 1999) posit that human judgment is the product of two, largely concurrent cognitive systems: an intuitive system which operates automatically, effortlessly, and often affectively (i.e., emotion-infused), and a reflective system which is more controlled, effortful, and normatively rational (Kahneman and Frederick 2002, label these as "System 1" and "System 2," respectively). Legal judgments should be no exception. They involve explicit, more or less rational processing, but they also reflect intuition, both non-emotional (see, generally, the "heuristics and biases" literature; e.g., Gigerenzer and Engel 2006) and emotional.

Let us assume (at least provisionally) that System 1 and System 2 operate concurrently (see Goodenough and Prehn 2004), and that emotional thinking influences but does not completely drive decision making about legal responsibility and blame. If that is so, we then face the daunting prospect of explaining *how* people draw on both (sometimes but not always automatic and intuitive) emotional thinking and (at least partly controlled and reflective) non-emotional thinking to reach their judgments. Which emotions, elicited by which sources, under what conditions, affect what kinds of decisions, to what extent, mediated by what other kinds of thoughts or feelings? If the initial, intuitive, emotion-laden response to the situation exerts an anchoring effect on the ultimate judgment, as moral intuitionists (e.g., Haidt 2001, 2007) would contend, how big is that effect, and how is it moderated by features of the decision maker, the facts of the case, and the decision-making environment?

In the first section of this chapter, I make a start on these questions by outlining the role of emotions in judgments of legal responsibility and blame, expanding on

N. Feigenson
Quinnipiac University School of Law, Hamden, CT, 06518, USA
e-mail: Neal.Feigenson@quinnipiac.edu

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work done with Jaihyun Park (Feigenson and Park 2006). The research indicates that emotions may influence legal judgments in several ways, most importantly by (i) altering the depth of information processing; (ii) biasing perception, recall, and interpretation of information in the direction of the emotion; and (iii) providing informational cues to judgment. These types of emotional influence, moreover, may co-occur, become part of emotional and cognitive feedback loops, and enter into still more complex relationships.

The following section of the chapter moves from the descriptive to the normative. When, if ever, is it a good thing for legal decision makers' emotions to influence their judgments? To address this question we need standards for evaluating legal decision making in general, so I offer, without attempting to defend in detail, a working set of criteria. Drawing on the psychological research, I then outline the judgmental benefits and drawbacks of emotional influence, and with those broad observations in mind, I analyze the roles that jurors' emotions may have played in their decisions in two actual cases, one criminal and one civil. The case studies illustrate the difficulties sometimes involved in determining whether, on balance, decision makers' various emotions enhance or impede good legal judgment.

In the third and final section of the chapter, I offer some thoughts on how emotional influences on legal decision making at trial can be contained, to the extent that this is deemed desirable. A commitment to public trials based on live witness testimony presented to lay decision makers in an adversarial, often dramatic context means that jurors' emotions will likely play a role in their judgments. Some current procedures for limiting emotional effects, however, especially those that exclude potentially emotion-provoking sources of information, are probably partly effective. If the goal of reducing emotional effects on judgment is thought to be important enough, trial judges applying current rules of evidence could exclude more emotion-provoking evidence than they do now, as well as take other steps to structure jurors' decision-making environment in ways that would further attenuate emotional influences.

How It Happens

Types of Affective Influence on Legal Judgments

Research has shown or implied that emotions and moods can influence legal judgments in at least four kinds of ways.[1] First, they can affect people's *strategies for processing information* – the extent to which people's processing of information

[1]The taxonomy offered here surely understates the complexity of affective influences on legal judgments (see, e.g., the chapter by Forgas this volume). For instance, although the model incorporates

tends to be "top-down" or schema-driven vs. "bottom-up" or data-driven – which can in turn affect legal judgments (see, e.g., Forgas this volume). Second, moods and emotions can *bias* the perception, recall, or evaluation of judgment-relevant facts in a *direction* consistent with the valence of the mood or the cognitive or appraisal structure of the emotion – a *congruency* effect. Jurors in a negative mood, for instance, may perceive more negative information about a party, recall more negative information about that party, and thus be influenced by that biased data set when judging that party's liability. Third, people may use their emotions and moods as *informational cues* to the proper attribution of responsibility or blame. Finally, the *anticipation* of *future* emotions (e.g., regret aversion) can shape decision making in the present.

Effects on Information Processing

Because the effects of mood on information processing are treated elsewhere in this volume (Forgas this volume), I will limit this brief discussion to pointing out that specific emotions as well as moods can influence depth of information processing. For instance, some studies have found that although anger and sadness are both negatively valenced emotions, only anger leads to less systematic information processing (as indicated by greater reliance on heuristics). This effect is due to what has been labeled the *appraisal tendencies* of the respective emotions (e.g., Keltner et al. 2006; Tiedens and Linton 2001). Specifically, some emotions (e.g., anger, disgust, happiness) are typically associated with a greater sense of certainty; others

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decision makers' emotional *states* to the extent that it considers *incidental* mood and emotion effects (i.e., effects prompted by sources unrelated to the judgment target, as opposed to *integral* effects prompted by the parties or the facts of the case), especially those preceding first exposure to information about the case, it does not consider emotional *traits* nor how these might interact with new emotional or non-emotional sources during trial (cf. e.g., Loewenstein and Lerner 2003, p. 632); and in general, the studies reviewed present central tendency data and not individual variability. Nor do I directly address how different legal decision makers – judges as opposed to jurors, say – may respond differently to emotion sources at trial due to their different prior experiences, training, and conception of their role. Specifically, most trial judges will have sat in judgment on many emotion-provoking legal cases while most jurors will not; moreover, most judges believe that they have a personal and professional commitment not to react emotionally to trial information. Judges, therefore, are likelier than jurors to have habituated to and to be less affected by emotion-provoking information. (Whether this is a good thing depends on one's normative theory of the proper role of emotions in legal judgment; I discuss this in the second section of the chapter.) The observations in this chapter, then, are meant primarily to describe emotion effects on juror decision making (see also the chapter by Kerr this volume), but they may also apply, albeit to a different extent, to decision making by judges or others. Also, I do not take any position on whether, in general, moods as opposed to emotions (or, for that matter, incidental versus integral emotion sources) would be expected to play a greater role in legal judgments about responsibility and blame (cf. Blumenthal (2005a), speculating that moods (as opposed to emotions) from incidental (as opposed to integral) sources are likely to be more influential).

(e.g., hope, anxiety, some forms of sadness) are typically associated with uncertainty (cf. Ortony et al. 1988; Smith and Ellsworth 1985). The more certain people feel, the less inclined they are to process information systematically, because they are more confident that they already know what they need to know to address the task at hand. Accordingly, Tiedens and Linton (2001) found that the higher degree of certainty associated with anger, as opposed to sadness (or fear), leads to greater susceptibility to heuristic cues. Other researchers have similarly found that anger leads people to consider fewer factors when making judgments (Lerner et al. 1998) and makes them more likely to be influenced by stereotypes in making related social judgments (Bodenhausen 1993; Bodenhausen et al. 1994).

Information processing style would be predicted to mediate the effect of emotions on attributions of legal responsibility and blame differently in different situations. Anger, for instance, may enhance or mitigate blaming of a target person, depending on whether the peripheral processing that anger increases favors or discourages attributing blame to that person. Thus, undergraduate participants in whom anger had been induced were likelier to find a peer guilty of a stereotype-consistent than a stereotype-inconsistent offense (Bodenhausen et al. 1994).

Directional Processing

People's moods can also incline people to construe social and other information in a direction consistent with the valence of the mood, a *mood-congruency* effect. People in positive moods tend to make more positive evaluations of ambiguous information; people in negative moods tend to interpret the same information more negatively (Bower 1981; Forgas and Bower 1987; Forgas and Moylan 1987; Petty et al. 2003). Directional processing of this sort would be expected to affect legal decision making. Jurors in a negative mood, for instance, would be predicted to perceive more negative information about the judgment target, to recall more negative information about the target, and thus to be influenced by that biased data set when forming ultimate judgments of responsibility.

As is the case with regard to affective influences on processing strategies, research has identified these kinds of directional effects for specific emotions as well as more general moods. For instance, DeSteno et al. (2000) found that inducing anger in participants led them to judge angering events to be more likely to occur than sad events, while inducing sadness led them to estimate sad events to be more likely to occur. Similarly, DeSteno et al. (2004) have found evidence of emotion-congruent processing of persuasive messages. The underlying mechanism could well be a kind of *priming* which activates *associative networks* (Bower 1981; Lerner and Tiedens 2006) in the mind, making emotion-congruent stimuli relatively more salient, hence likelier to be noticed, remembered, and used in the judgment task.

Appraisal tendency theory, invoked above to account for emotion effects on depth of information processing, has also been offered to explain directional effects

of incidental emotion on judgments of legal responsibility. For instance, a consistent finding in the research is that people who are angry tend to blame more (for a review, see Lerner and Tiedens 2006). For example, Lerner et al. (1998) found that participants who viewed an anger-provoking video clip and then read several vignettes of accident cases blamed the defendants who caused the injuries more than did participants who had watched an emotion-neutral video. Similarly, Keltner et al. (1993) found that angry participants tended to attribute more responsibility to the person than the situation for ambiguous social mishaps; sad participants did the opposite. According to appraisal tendency theory, experiencing an emotion makes features of that emotion's cognitive or appraisal structure more accessible (Bower 1981; Bower and Forgas 2001) and thus more likely to be utilized (consciously or not) in subsequent perceptions and judgments.

One especially interesting feature of the appraisal tendency process is that even where people are aware that the source of their emotional state has nothing to do with the judgment target, the emotion continues to affect their judgments (Loewenstein and Lerner 2003). Anger, for instance, has been shown to persist past the emotion-provoking episode in the form of a residual arousal or excitation, which may then influence subsequent, unrelated decisions (Zillmann 1983). Apparently, people remain at least partly unaware of the ways in which that emotion has primed them to construe the target (Lerner et al. 1998; cf. Zajonc 2000).

Informational Effects

People may also take their affective state as *directly informative* about the target of their judgment. This path is described in the literature by the *affect-as-information* model (Clore et al. 1994; Schwarz 1990, 2002; Schwarz and Clore 1983, 1988). Emotions can have direct effects on ultimate judgments when the emotions are incidental, i.e., substantively irrelevant, to the judgment target or task. This happens when people *misattribute* their emotional response to the target instead of its true source (Schwarz and Clore 1983).

Direct effects from incidental emotion sources on many sorts of decisions, from judgments of life satisfaction (Schwarz and Clore 1983) to risk perceptions (DeSteno et al. 2000), have been explained in terms of the affect-as-information mechanism. For instance, DeSteno and his colleagues found that angry participants believed that angering events were more likely to occur than sad events; conversely, sad participants believed that sad events were more likely to occur (DeSteno et al. 2000). Mediational analyses showed that these effects were due to the informational cue provided by the emotional state. Specifically, angry feelings informed participants that the world was generally an anger-inducing place, which in turn affected their estimates of the likelihood of anger-inducing events; sadness informed others that the world was a depressing place, and this belief in turn affected estimates of the likelihood of sad events. Dunn and Schweitzer (2005) found that

incidental emotion influenced judgments of interpersonal trust when the emotion's appraisal dimensions were consistent with the nature of the judgment task.[2]

In the affect-as-information process, then, the emotional state is taken as directly informative of the judgment to be reached, and thus pulls that judgment in the direction of the emotion, rather than doing so only through the mediation of an effect on construals of case-relevant information.[3] To the best of my knowledge, there are no studies that set out to test directly the affect-as-information process using incidental emotion as an independent variable and judgments of legal blame as the dependent variable, although affect-as-information has been invoked to explain incidental emotion effects on judgments of blame after the fact (Gallagher and Clore 1985). Some research on *terror management theory*, however, is consistent with this path of affective influence (see Hirshberger 2006; for a review, see Arndt et al. 2005; Lieberman this volume).

A number of studies have examined instead the role of emotional responses to trial information – that is, *integral* emotion sources – in people's judgments of responsibility and blame. Here the path from emotion to judgment is direct, but the emotion is functioning as a *mediator* (e.g., Baron and Kenny 1986) of the effect of case features, such as the severity of an accident or a party's blameworthiness, on attributions of responsibility and damage awards (and not as an independent variable). For instance, Bornstein (1998) has found that sympathy mediates the effect of outcome severity on mock jurors' responsibility judgments. In one set of experiments, a product liability lawsuit against the manufacturer of a birth control pill, mock jurors were more sympathetic to the more seriously injured plaintiff, and this greater sympathy made them more likely to find the defendant liable. Similarly, I and my colleagues (Feigenson et al. 2001) found that anger mediated the effect of the parties' blameworthiness and the severity of the outcome on their apportionments of fault (but not their damage awards) in comparative negligence cases. Increasing the severity of the accident made participants angrier at the defendant, which led them to apportion more fault to the defendant; increasing the plaintiff's blameworthiness made them angrier at the plaintiff, which led them to apportion more fault to the plaintiff. The most plausible explanation for these sorts of effects

[2]Specifically, Dunn and Schweitzer found that direct incidental emotion effects on judgments of trust were moderated not only by the valence of the emotion but also by the secondary appraisal dimension (Smith and Ellsworth 1985) of control. Incidental emotion affected how much participants trusted another person (a co-worker) in a direction consistent with the valence of the emotion (e.g., happy participants expressed greater trust than sad ones), but in addition, emotions with a control dimension consistent with the judgment task affected trust more than did judgment task-inconsistent emotions: Anger, which is associated with other-person control, affected trust of another person more than did a similarly valenced emotion (e.g., sadness) not associated with other-control. Thus, their study lends support to appraisal tendency theory (cf., e.g., Lerner and Tiedens (2006)). Dunn and Schweitzer also found, however, that identifying the source of the incidental emotion eliminated the effects of emotion on trust, which is consistent with the affect-as-information hypothesis.

[3]That is, "indirect" and "direct" are operationalized as *mediated* and *non-mediated* effects, respectively.

is that people are using their current emotional state as an *informational cue* regarding the judgment target. For example, because the cognitive structure of anger is "disapproving of someone else's blameworthy action and being displeased about the related event" (Ortony et al. 1988, p. 148), being angry sends a signal (Damasio 1994) to the person that the target of judgment has behaved in a blameworthy fashion and, therefore, deserves to be blamed.

Two studies involving the effects of photographic evidence on mock juror decision making also appear to reflect informational effects from integral emotion sources. Douglas et al. (1997) found that mock jurors in a murder case who viewed autopsy photographs were more likely to report feeling anxious, anguished, disturbed, and shocked than those who did not view the photographs, and that the more anxious and shocked the mock jurors were, the more they believed that the defendant was guilty. These emotions, therefore, mediated the effect of the independent variable (autopsy photograph vs. no photograph) on verdicts. More recently, Bright and Goodman-Delahunty (2006) found that showing mock jurors gruesome crime scene photographs made them angrier at the defendant, which in turn made them likelier to convict.[4]

One other likely emotional influence on jurors in at least some criminal cases can also be understood in terms of affect-as-information, although to the best of my knowledge there are as yet no experimental studies confirming this. If jurors experience *fear* in response to the defendant or other case-relevant facts, they may take this fear as directly informative of their judgment. Specifically, fear should make them likelier to vote to convict, because the action tendency associated with fear is to *avoid* the stimulus (e.g., Öhman 2000; Shaver et al. 2001). Although humans have evolved to act on their fear by preparing to flee, that is neither a necessary nor appropriate response for jurors; instead, they think that the source of the fear can be avoided if the defendant is imprisoned, and they know that a guilty verdict is a precondition for that sentence.

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[4]Bright and Goodman-Delahunty (2006) speculated that participants' emotional responses may have biased their processing of the evidence such that they deemed the prosecution's evidence to be stronger, leading to more convictions. That would be consistent with appraisal tendency theory. The study did not, however, include an analysis featuring participants' evaluations of the sufficiency of the evidence as a mediator, which would have permitted a direct test of the appraisal tendency path. And the authors did find that anger mediated the effect of the gruesome photographs on verdicts, a direct, informational path from emotion to judgments of blame.
It is possible that the "outrage heuristic" (Kahneman and Frederick 2002, pp. 63–65; Sunstein 2005) is another instance of affect-as-information effects on legal judgments. In previous research (Sunstein et al. 1998), participants were given various scenarios of corporate malfeasance resulting in personal injuries; some were asked to rate their outrage at the corporations' conduct (on a 0–6 scale) while others were asked to assess punitive damages (on an unbounded scale) if they thought that punitives were warranted. The researchers found a strong positive correlation between reported outrage and mean damage awards. Kahneman and Frederick (2002) cite outrage as an example of an affective heuristic which "mediated" the effect of case characteristics on damage awards (p. 63). Given the experimental design and the reported results, however, it is not possible to show that participants' emotional responses actually mediated the effect of case facts on punitive damages judgments in the sense that affect-as-information from integral information sources requires. (Also, I cannot rule out the possibility that the outrage heuristic is an instance of yet another path, from attributions to emotions to punishment, to be discussed briefly later.)

Complicating the Picture

In truth, the ways in which emotions may influence legal judgments are likely to be much more complicated than this, for several reasons: emotional and cognitive *feedback loops*; the distinction between judgments of responsibility or blame and those of punishment and damage awards, which creates another path of emotional influence; the *co-occurrence* of different types of emotional influence (information processing, directional effects, and information effects); and the possibility that decision makers will experience *multiple* and conflicting emotions during the trial.

Feedback Loops

It seems likely that the paths of affective influence on attributions of responsibility or blame in any given case may be recursive rather than linear. That is to say, the decision maker may respond emotionally to the facts of the case (features of the judgment target) or to his or her own attribution of responsibility, and these emotions may in turn influence further consideration of the facts or further rumination toward the attribution. In this way, emotions and legal judgments can form feedback loops. For instance, the construal of target features can generate anger. That anger then makes salient the role of dispositional factors of other people as causes of harm, engendering blame (Keltner et al. 1993). Thus, anger and attributions of blame comprise a reciprocal relationship in which each can increase the other (see also Quigley and Tedeschi 1996; Tiedens 2001; and see discussion of mood congruency above). The most explicit, albeit indirect, empirical support for feedback loops is provided by Quigley and Tedeschi (1996), who found that participants' anger mediated the effects of their perceptions of the amount of harm, the target's intent to harm, and the target's justification for inflicting harm on their judgments of blame, and that their judgments of blame mediated the effects of these same variables on their anger.

In addition, given research showing that jurors subconsciously adjust their ultimate judgments and their evaluations of the evidence and arguments on which those judgments are based to achieve *cognitive coherence* (Simon 2004; Simon et al. 2004, 2008), jurors may take the emotions they experience during the judgment process as a cue to whether they have completed the process satisfactorily (see Feigenson 2000; Feigenson et al. 2001). In this way, jurors' provisional judgments of responsibility may serve to rationalize and thus underscore their emotional responses to trial information, which then further increase their confidence in their interpretations of that evidence, creating a feedback loop.

It seems reasonable to suppose that such feedback loops are a common feature of actual legal decision making. Indeed, given the temporal dimension of trials –

decision makers are continuously exposed to new sources of information over time and constantly invited to refocus on the judgment target, integrating each new item of information (or not) into their more or less tentative judgment-in-the-making – feedback loops would seem to be inevitable.

Emotional Responses *to* Attributions of Responsibility

In civil cases, jurors who attribute (enough) responsibility to the defendant must then proceed to assess damages. In criminal cases tried to a judge, the judge must follow a guilty verdict by deciding on a punishment, and jurors must do this in capital cases. That is, there is often another step after the judgment of responsibility or blame, and that presents another opportunity for emotions to influence the ultimate decision. Some research shows that relevant features of the case can affect attributions of responsibility and blame, which in turn affect emotional responses and their associated action tendencies. The research design takes some stimulus of interest – say, how blameworthy the victim is – as the independent variable, and measures emotional response and inclination to act on it as the dependent variable. For instance, in a series of studies spanning a generation, Bernard Weiner and his associates have found that emotional responses to suffering depend on attributions of responsibility (Weiner 1995). When an observer perceives a person in need of aid (including a victim of accident, disease, or natural disaster), the observer attempts to discern the cause of the need. If the cause is perceived to be outside the sufferer's control, the observer reacts with sympathy and is inclined to help. If the cause is perceived to be within the sufferer's control, the observer reacts with anger and is inclined to ignore the sufferer. Thus, emotion figures as an output of the attribution of responsibility or blame, and influences both the extent and the perceived aims of any punishment (Weiner et al. 1997). And of course, these emotions and the (contemplation of the) ultimate judgment become elements in potential feedback loops, which may lead to further emotion effects of the kinds discussed above.

Simultaneous Emotion Effects of Different Types

The different ways in which affect can influence legal judgment – altering depth of processing, triggering directional processing, and providing informational cues to target interpretation and/or judgment – are not mutually exclusive, but rather may operate simultaneously. For instance, the angered decision maker should be primed to construe target information in the direction of greater blame. At the same time, anger may reduce depth of processing (relative to sadness or a neutral mood), leading to greater reliance on stereotypes, which may amplify blame from directional and informational processes if the target conduct is stereotype-consistent (Bodenhausen et al. 1994) but may mitigate blame if the conduct is stereotype-inconsistent. Other multiple effects of emotion on information processing, as well as the reverse, are possible (see Forgas 2000, this volume).

Multiple Emotions

It is also important to point out that even these multiple paths of affective influence understate the complexity of emotion effects on judgments of legal responsibility and blame. For instance, the same emotion relating to the same judgment target might incline decision makers in conflicting directions: Angry jurors might in general be more inclined to hold a criminal defendant responsible for engaging in the charged behavior, but if the defendant belongs to a group stereotypically thought to possess positive rather than negative criminal traits, jurors' anger might incline them to rely more on those stereotypes and find the defendant less blameworthy. Jurors may also experience multiple (integral) emotions toward a given party that conflict with one another. For instance, in a comparative negligence case, jurors may feel sympathy for an accident victim, which inclines them to hold the defendant more responsible (Bornstein 1994); yet they may also feel anger toward that same victim, which would incline them to hold the victim more responsible and the defendant less (Feigenson et al. 1997). The fact that legal cases present multiple judgment targets creates further complex relations among jurors' emotional reactions and between those reactions and their ultimate decisions.

Still more complex combinations of emotional influence on legal judgments can be imagined. Indeed, it may be that *ambivalence* itself has effects on judgment that are explicable in terms of appraisal tendency (see Lerner and Tiedens 2006). In sum, this outline of types of affective influence surely understates the actual complexity of the interplays of emotions and non-emotional cognitions in legal decision making.

Anticipated Emotions

Before moving on, I need to say a word about how judgments may be affected not only by currently experienced emotions but also by *anticipated* or *expected* emotions. "Dominant models of decision making … assume that people attempt to predict the emotional consequences associated with alternative courses of action and then select actions that maximize positive emotions and minimize negative emotions" (Loewenstein and Lerner 2003). Anticipated emotions arise from the construal of the target, so they involve integral, not incidental, stimuli, but they are not themselves emotional experiences (yet); they are non-emotional "cognitive predictions about the emotional consequences of decision outcomes" (Han and Lerner in press). For instance, the effect of *regret aversion* on current decision making has been studied (see Baumeister et al. 2006; Mellers et al. 1999). Anticipated emotions may combine with current or immediate ones to influence decision making (Loewenstein and Lerner 2003).

It makes sense to assume that legal decision makers contemplate the emotional consequences of their decisions for themselves and for others, and that these thoughts might in turn affect their decisions (Wiener et al. 2006). For instance, it is

possible that jurors may vote to acquit a woman who killed her husband and who offers battered woman syndrome testimony in her defense in order to avoid the negative emotion they anticipate that they would feel if they voted to convict (Wiener et al. 2006, p. 244, discussing Schuller and Rzepa 2002). To the best of my knowledge, however, there is no research directly testing for the effects, if any, of anticipated emotions on judgments of legal responsibility or blame.

From the Lab to the Courtroom

This survey of the research to date on various affective influences on judgments of legal responsibility and blame leaves central questions unanswered. Why does it matter whether moods and emotions may influence judgments in these different ways? Does the recursive nature of legal decision makers' thoughts and feelings as they strive to reach judgments render futile any attempt to tease out the particular threads of cause and effect? And is there any way of gauging in general the cumulative effect of emotions on legal judgments – prototypically, those reached by jurors after deliberations?

These questions are not merely of academic interest. Advocates preparing for and presenting their cases at trial want to be able to evaluate accurately how persuasive different ways of presenting evidence and argument are likely to be. Judges would like to be able to make good judgment calls about whether the probative value of any given item of evidence is (substantially) outweighed by the risk of unfair prejudice to the opposing party, including any tendency of that evidence to arouse jurors' emotions improperly against the opponent. Rule- and policy makers, including judges whose decisions carry precedential weight but also legislators, advisory committees, and others, want to know how to structure the decision-making process and environment to reduce the likely impact of unwanted emotional influences where that is both feasible and consistent with other important values.

Plainly the analysis of the latter two topics, if not all three, requires us to address the normative question of when, if ever, emotional influences on legal decision making are proper. I address this in the next section of the chapter. My aim here is to say a bit more about the descriptive questions. How might the various paths of emotional influences play out in the context of actual legal proceedings?

Emotional Influences in Court: An Overview

Jurors are exposed to many potential sources of emotional influence. Most likely they come to the courthouse in most cases with varying mixtures of anticipation, anxiety or stress (National Center for State Courts 1998), and perhaps other emotions. Before the trial begins they may have learned something about the case from news reports or other sources; indeed, mass media coverage of the justice system is biased toward reporting precisely those kinds of cases likeliest to

provoke strong moral–emotional responses (for a review of pretrial publicity effects research, see Lieberman and Arndt 2000). With regard to the vast majority of less sensational cases of which jurors first hear when they appear for voir dire, the sketch of the facts that they learn from the lawyers and/or the judge may be sufficient to prompt intuitive, emotional responses, and the questions that the lawyers (to the extent permitted) ask in order to tease out possible bias may trigger further emotions. If seated as jurors, their background moods (especially anxiety) are likely to be heightened somewhat by the environment and the formalities of courtroom procedure. The lawyers then present fuller descriptions of the facts in their opening statements, sometimes accompanied by photographs or other visual displays, giving jurors more than enough information for forming moral–emotional responses. As the trial proceeds, each witness's testimony and his or her exchanges with the lawyers may provoke responses ranging from overwhelming emotion to none at all.[5] Visual and audio demonstrative evidence – crime scene photos, 911 calls – can be exceptionally vivid and emotionally compelling. Incidental or at any rate extraevidential emotion sources also pervade the courtroom, including the parties' demeanor when not on the witness stand (Levenson 2008); the lawyers' appearance and demeanor; in some cases, the conduct or appearance of others in court (for instance, in a homicide case, members of the victim's family may wear buttons featuring the victim's photograph; e.g., *Carey v. Musladin* 2006); and signs of emotional responses by fellow jurors. During closing arguments, the lawyers' recapitulations of their stories of the case (again, increasingly accompanied by visual displays) may offer jurors yet another opportunity to integrate their emotions and non-emotional cognitions into a satisfyingly complete sense of what justice requires. In the sentencing phase of a capital case, jurors are once again exposed to emotion-provoking evidence in the form of victim impact statements (e.g., Myers et al. 2002). And during deliberations jurors are exposed to further emotional influences as they reconsider the evidence and arguments presented at trial and hear the remarks, and observe the emotional displays, of their fellow jurors.

Incidental Affective Influences

Consider first possible incidental mood effects on jurors' depth or direction of information processing. As noted, people in moderately negative moods tend to process information more carefully; those in moderately positive moods tend to do

[5] Jurors' emotional responses to, say, witness testimony are to be distinguished from the *witness's display* of emotions, which has been found to affect mock jurors' judgments of witness credibility (e.g., Kaufmann et al. 2003) and judgments of the defendant/witness's guilt (Salekin et al. 1995). Myers et al. (2002) found that strong displays of affect by a witness giving victim impact testimony in a videotaped mock sentencing hearing led mock jurors to experience significantly greater negative affect, but this negative affect did not influence their sentencing judgments.

so less carefully, resorting to more heuristic processing. Let us assume that most jurors are likely to be in a mildly negative mood as they enter the courtroom; not very happy, sad, or angry, but possibly somewhat anxious (National Center for State Courts 1998). If so, then jurors' initial affective states should ready them to consider trial information carefully, as they should.

What about incidental emotion effects? It is possible that jurors' residual anger or sympathy from an incidental source – for instance, having been exposed just before trial to what they perceived to be an unrelated instance of injustice unpunished or undeserved suffering, respectively – could influence their initial construal of the facts of the case, and hence their initial moral–emotional response. This is the carry-over effect shown by some of the appraisal tendency research (e.g., Lerner et al. 1998). Indeed, questions from the lawyers during voir dire about jurors' attitudes toward tort reform or the criminal justice system, for instance, may prompt emotion-laden thinking which, although incidental to the facts of the case, could color jurors' perceptions of the case.

Initial Integral Influences: Moral–Emotional Intuitionism Reconsidered

Emotions provoked by jurors' first exposure to the facts of the case may indeed be quite strong – think of child sexual abuse cases (e.g., Bandes 2007) or brutal murders of persons with whom jurors feel some empathy, or an accident case in which the plaintiff is severely and permanently injured. These emotions from integral sources may affect ultimate judgments in several ways, as we have seen. Especially in cases in which people's initial moral–emotional response to the facts, whether it is anger, sympathy, disgust, or some mixture of them, is strong and unequivocal, informational cues, together with depth of processing and directional effects, may reinforce one another so that the first intuition is highly resistant to later modification.

According to current theories of moral intuitionism (Haidt 2001, 2007), a decision maker's initial moral–emotional response to a case, by whatever mechanisms it operates, plays a very important, if not dispositive, role in the ultimate judgment, and any subsequent emotional experiences (or non-emotional cognitions, for that matter) are not likely to do much more than underscore the judgment already reached intuitively and immediately. Quite a lot of research supports the theory (see, e.g., Haidt 2001; Haidt and Bjorklund 2008; Wilson 2002). As illustrated by work on dual process theories generally, unconscious processing explains many of our decisions and actions much better than ostensibly reasoned introspection can. We are remarkably facile at coming up with convincing-sounding post hoc explanations for our behavior that are demonstrably false (Nisbett and Wilson 1977); the confabulations of split-brain patients, who offer plausible stories to explain conduct actually caused by stimuli they are physically incapable of recognizing, are exemplary (Haidt and Bjorklund 2008). According to this research, we are fooling

ourselves if we think that the conscious self is in control with regard to moral/legal decision making or pretty much anything else.[6]

That said, we all seem to have had the experience of consciously thinking through moral and legal problems, perhaps on our own but often in response to what others have said or written, gaining new insights along the way and sometimes changing our minds. We all seem to have had the experience of tempering (and, again, sometimes changing) our initial emotion-driven conclusions, whether because our first emotional response is met and superseded by others, or because reasoned argument leads us to reconsider those conclusions, or because the force of the emotion dissipates over time. And we all seem to recall instances in which we were able to change other people's minds by offering reasons and not (or not only) by reshaping their intuitions (by emotional appeal or otherwise). Conscious rational thought appears to matter.

So, is the initial moral–emotional response to the case typically dispositive? Actually, moral intuitionism leaves considerable room for both reasons and emotions subsequent to the initial response to matter. As noted, most psychologists favor a dual process model in which both emotional and non-emotional cognitions can influence moral–legal judgments (see Goodenough and Prehn 2004). Neuroscientists concur, as reflected by Joshua Greene's fMRI studies: These indicate that people use areas of the brain associated with abstract, non-emotional reasoning and cognitive control as well as areas associated with more intuitive emotional responses to solve moral dilemmas in which utilitarian values require "personal" moral violations (Greene et al. 2004). And Haidt himself has stepped back from his earlier, stronger versions of moral intuitionism, speaking of the "primacy but not dictatorship" of affect-laden intuitions (Haidt 2007, p. 998).[7]

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[6]Philosopher Owen Flanagan, whom Wilson (2002, p. 48) cites, offers a somewhat more charitable metaphor: consciousness-as-Ronald-Reagan. Just as President Reagan (according to many historians) may have felt that he was in control over governmental policy but was really much less in control than it seemed either from inside or outside government, so "we exert less control over our own minds than we think."

[7]See also Greene and Haidt (2002, p. 522): "[R]easoning can play an important role in the production of impersonal moral judgments and in personal moral judgments in which reasoned considerations and emotional intuitions conflict." Elsewhere, Haidt and Bjorklund (2008, pp. 200–201) write that their model of moral reasoning "is not about 'cognition' and 'emotion'; it is about two kinds of cognition: fast intuition (which is sometimes but not always a part of an emotional response) and slow reasoning. Intuitions often conflict, or lead to obviously undesirable outcomes … and when they do, the conflict must get resolved somehow. This resolution requires time and the involvement of brain areas that handle response conflict (such as the anterior cingulated cortex). The private reflection link of the [model] is intended to handle exactly these sorts of cases in which a person considers responses beyond the initial intuitive response." Monin et al. (2007) take a different perspective, arguing that the opposition between emotional and rational judgment in response to moral encounters is a false dichotomy prompted by the prototypical consideration of either complex moral dilemmas (which lead to models of rational deliberation) or simpler moral infractions (which lead to models of affective, often non-rational judgment), although affect plays some role in the former and (as indicated by the above quotations to Haidt and colleagues) reason plays some role in the latter.

In a recent article, Haidt identifies "at least three ways we can override our immediate intuitive responses. We can use conscious verbal reasoning …. We can reframe a situation, thereby triggering a second flash of intuition that may compete with the first. And we can talk with people who raise new arguments, which then trigger in us new flashes of intuition" (Haidt 2007, p. 999). Note two interesting things about this model of mental processing. The first is that moral–emotional intuitions now seem to be not only independent variables (change the intuition and you change the judgment) but also mediators of the influence of rational thought on judgment. Reasons can be efficacious; it's just that they do their work by shaping intuitions.

Second, however infrequent (according to Haidt) the first two means of overriding initial intuitive responses – consciously thinking it through or reframing the situation for ourselves – may be in our everyday lives, in legal decision making all three occur all the time. Jurors, for instance, from the time they come to the courthouse and watch the orientation video to their empanelment to hearing the judge's instructions before trial to hearing the final instructions before retiring to deliberate, are encouraged to think carefully about the case before them: to listen, to ponder, to suspend judgment. The very structure of the trial ensures (if the attorneys are competent) that jurors will be exposed to competing ways of framing the situation they are asked to judge. And of course, during both trial and deliberations, jurors will hear the arguments of others. So legal decision making in the context of actual trials (more so than in most of the experimental simulations discussed earlier) seems especially amenable to the influence of reasons as well as intuitions.[8]

The hold of moral–emotional intuitionism on legal judgment may be even more attenuated than this. All disputes that reach trial are in theory capable of eliciting intuitive moral–emotional responses, if only because jurors are called upon to determine the wrongfulness (if any) of at least one party's behavior. But some cases, unlike child sex abuse or brutal murder cases, may not prompt very strong intuitions. Consider, for instance, a complex case involving the alleged breach of a commercial contract, where jurors may be unfamiliar with the relevant norms of conduct in the business and have a difficult time understanding how complicated facts map onto either those norms or the relevant verdict categories. Or jurors may have complex and conflicting moral–emotional reactions to their first encounter with the facts of the case, baffling any clear intuition about who is in the right. In either case, according to Haidt and Bjorklund (2008), our conscious minds need not just argue for the intuitively chosen side and try to convince others of its moral worth. Rather, they acknowledge that when "the initial intuition is weak and processing capacity is high," explicit moral reasoning "truly is causal" (p. 193).

[8]Jurors' processing of those reasons of course remains more or less prone to all of the various kinds of cognitive biases well documented in the literature, including such habits of thought as confirmation bias and cognitive coherence which, as Haidt (2007) observes, tend to underscore the primacy of the intuitive response. The immediate point, though, is merely that according to the intuitionist model itself, juror decision making is likely to feature causally efficacious rational (System 2) as well as non-rational (System 1) processing.

However uncommon this situation may be in everyday life, surely it describes how legal decision makers typically confront some substantial number of legal cases.

Subsequent Integral Influences

Potential integral sources of emotional influence continue, as noted, throughout the trial. Consider two. Vivid photographic evidence, for instance, has been shown to affect mock jurors' emotional responses and verdicts in criminal trials. Bright and Goodman-Delahunty (2006) showed that gruesome photographic evidence can make mock jurors likelier to vote to convict the defendant because it makes them angrier at the defendant. Photographs dramatically increased the likelihood of conviction across conditions, but the size of the correlations along the mediational path seems modest.[9] In short, while visual evidence of this sort is widely believed to be a significant source of emotional decision making and while the few experimental studies to date indicate that it may have some effect on jurors' judgments, the impact does not appear to be overwhelming.

Jurors are also exposed to (largely) integral sources of emotion during closing arguments. Lawyers retell their stories of the case with greater coherence and freedom than allowed earlier in the trial, and may augment their oral presentations with photographs, videos, or PowerPoint slide shows. All of these are designed to appeal to jurors' emotions as well as their non-emotional thinking (Sherwin et al. 2006). Anecdotal evidence suggests that dramatic moments in closing can make the difference between a verdict of guilty and one of not guilty (e.g., Carney and Feigenson 2004). Unfortunately, there are no controlled studies as yet that permit even an estimate of the effects of emotions induced during closing argument on jurors' ultimate judgments.

Summary

Legal decision makers' emotions may influence their judgment process at any number of points and through various mechanisms, but the research suggests that emotional influences do not typically overwhelm reasoned judgment, and in particular, that the initial emotion-infused response to the case does not necessarily drive the ultimate decision to attribute responsibility or blame (or to award damages or punish). Moreover, the research indicates that people's use of their emotions in reaching legal decisions is responsive to the task conditions and the decision-making

[9] $R^2 = 0.10–0.12$ (Bright & Goodman-Delahunty 2006, p. 196). Douglas et al. (1997) similarly found modest correlations (on the order of $\beta = 0.14–0.28$) between participants' feelings of sadness, outrage, vengefulness, shock, and anxiety after seeing gruesome crime scene photographs and their tendency to vote to convict the defendant.

environment in ways that significantly qualify moral intuitionism. For instance, Lerner and colleagues (1998) showed that participants who knew that they would be accountable for their judgments tended to punish the defendants in the target scenarios in accordance with the degree to which they perceived that the defendant had acted freely – thus, arguably in accordance with attributional norms – and not based on how angry they felt toward the defendants (where the anger had been induced by watching an unrelated video of a beating, i.e., an incidental emotion source).[10] This is potentially a very important finding: Accountability was not an independent variable in any of the other studies reported above, so it could be that some of the evidence for emotion effects on legal judgments would have been attenuated had participants (like real jurors) known that they would have to account for their decisions.

It could well be that participants' emotions in laboratory settings are much less intense than to those experienced by actual jurors confronting real tragedies. If so, then the research to date may not seriously challenge the moral–emotional intuitionist hypothesis or even the widely held belief that the emotions jurors experience later in the case unduly sway their decisions. Moreover, even small to moderate effects may affect the outcome in closely contested cases. On the other hand, in real trials, jurors' accountability to each other during deliberations (if not to the judge or any outside party) and their awareness of other aspects of the gravity of their obligations would be expected to exert stronger moderating effects than they do in the lab. More research is certainly needed.

Should It Happen?

Assuming that legal decision makers' emotions influence their judgments of responsibility and blame, at least some of the time and to some extent, the next question is whether and when that is a good thing. How much emotional influence, and of what kinds, is optimal in what situations?

For several reasons the experimental psychological research reviewed above can shed only limited light on this question. First, deciding when and to what extent decision makers' emotions ought to influence their judgments of legal blame ultimately depends on one's theory of the person as a moral being and the place of emotionality in that conception; this, in turn, implicates and is shaped by one's beliefs about the social and cultural functions of emotions generally and of the ideal

[10]Drawing on the same research, Goldberg et al. (1999) found that all participants experienced the same degree of anger from the incidental source, but only those participants who had seen the unrelated video and been told that the assailants had gone unpunished actually used their anger in judging the defendants in the target scenarios. Neither appraisal tendency nor affect-as-information fully accounts for this, because if participants had simply been relying on their emotion as an informational source, then that emotion should have affected judgments across conditions.

forms of social ordering. Needless to say, these are large topics about which cultural psychologists (e.g., Shweder 1991, 1994), moral psychologists (e.g., Haidt 2007; Sinnott-Armstrong 2008) anthropologists (e.g., Douglas 1993), sociologists (e.g., Hochschild 1983), philosophers (e.g., Nussbaum 1994, 2001; Solomon 1990, 1994), and others have much to say. To address these matters properly would require a chapter (or book) of its own, so I am going to try to bracket them and proceed as far as possible with a much thinner conception of the proper role of emotions in legal decision making. Second, even a thin notion of when (if ever) legal decision makers should use their emotions to judge responsibility or blame necessarily depends on highly contestable criteria for what makes legal judgments in general better or worse. I will outline these criteria so that I can refer back to them in later discussion, without proposing any weighting or order of priority among them. Third, even if we can agree for sake of argument on the criteria by which goodness of legal judgment is to be measured, in some cases it will be difficult to determine whether decision makers' use of their emotions to decide is a net good or bad, and even if it is a net bad, whether avoiding that bad by trying to eliminate the emotional influence would be worth the cost.

With those caveats, let us see whether the psychological research can inform the normative inquiry into the proper role of decision makers' emotions in their judgments of legal blame. After some background observations about the legal system's own ambivalence toward this question, I identify criteria for evaluating legal decision making generally. I then outline, also at a general level, how decision makers' emotions would be expected to help or hinder good judgment. The section concludes with two case studies intended to illustrate both the judgmental benefits and risks of emotional decision making and some of the difficulties involved in deciding whether those emotional influences are on balance desirable.

Current Legal Norms and Practices

Legal doctrine and the legal system display a good deal of ambivalence toward the role of emotion in judgment. On the one hand, norms of legal decision making have traditionally stressed rationality and dispassion (Feigenson 1997). Standard jury instructions discourage decision makers from using their emotions to decide cases (e.g., Wright and Ankerman 1993), and trial judges often exclude evidence precisely to avoid provoking jurors' emotional responses, fearing that those emotions will "unfairly prejudice" jurors' decisions (Federal Rules of Evidence 2008).

On the other hand, many aspects of evidence law and trial procedure not only acknowledge the obvious fact that jurors may respond emotionally to trial information but seem to welcome those responses and even to enhance their salience in jurors' decision making processes. The very concept of the trial as a live performance in which witnesses are asked to recall the past in the presence of the decision makers, as well as other particular features of the trial (such as the confrontation between witness and cross-examiner), make for dramas that elicit decision makers'

emotions (see Auslander 1999; Burns 1999; Mueller 2006/2007). Mock jurors expect crime victims to express "appropriate" levels of emotions (Rose et al. 2006). Legal rules in recent decades have made more room for emotion-provoking "victim impact evidence" in both capital and non-capital cases (Bandes 1996; Greene 1999). Trial lawyers routinely seek to activate jurors' emotions as well as their non-emotional thinking, whether through captivating storytelling (e.g., Spence 1995), witness examinations that seek to bring out "visceral" case themes (e.g., Ball 1997), or vivid demonstrative evidence (see generally Sherwin et al. 2006), although emotional appeals that jurors not only recognize but perceive to be excessive can be ineffective (Hans and Sweigart 1993). No less an authority than the United States Supreme Court has recognized at least the prosecution's right (in most contexts) to prove its case with evidence of its choosing that "tells a colorful story with descriptive richness," in order "to convince the jurors that a guilty verdict would be morally reasonable as much as to point to the discrete elements of the defendant's legal fault" (*Old Chief v. United States* 1997, pp. 187–188). The Court's opinion does not explicitly mention jurors' emotions, but it is hard to see how "descriptive richness" would convince jurors of the moral reasonableness of their verdict without somehow appealing to their emotions.

Thus, we might infer from trial structure and practice that at least some emotional influences on legal judgments are considered a good thing. But perhaps all of the features of legal practice that give rise to that inference were developed for and serve other purposes, and any emotional effects that they provoke are merely necessary evils (if that) in the legal decision making process. We need to examine the matter more analytically.

Standards for Good Legal Judgment

When might it be especially good or bad for jurors' emotions to influence their judgments of responsibility and blame? We cannot really address this normative question until we can agree, at least for sake of argument, on criteria for evaluating these judgments. And here we immediately run into the difficulty that multiple criteria may be and have been applied. For instance, we might focus on goodness of *outcome*. This could require evaluating the correctness or accuracy of jurors' judgments, and to do that, we might compare them to (i) what a judge would have decided (e.g., Kalven and Zeisel 1966; Eisenberg et al. 2005); (ii) what the relevant legal rules appear to require (presumably this is the standard that judges themselves ordinarily think that they are employing in deciding whether to overturn jury verdicts, and thus is the most familiar to legal audiences); (iii) standards of rational decision making commonly accepted as normative in cognitive and social psychological research (for a critical discussion, see Funder 1987); or (iv) various alternative standards of rationality employed by social actors concerned, as jurors arguably are, not exclusively or even primarily with deciding accurately (as they would be according to the "intuitive social scientist" model) but with being able to defend

their decisions (the "intuitive politician"), punish social deviance ("intuitive prosecutor"), or uphold sacred community values ("intuitive theologian") (Tetlock 2002). Goodness of outcome could also be determined consequentially, for instance, according to a theory of optimal deterrence (e.g., Sunstein 2005; Sunstein et al. 2003). This list of criteria is probably not exhaustive, but even these possibilities are sufficient to suggest the scope of the problem: Each standard may itself be less than fully determinate in any given situation – for instance, authoritative legal sources may be ambivalent or incomplete; consequentialists may disagree about the factors to be considered or how they should be weighted – and the standards may conflict with one another.

Furthermore, looking to the acceptability of outcomes is just one way to evaluate the goodness of legal decision making and judgment, and hence the role of emotions (or anything else) in the judgment process. We might also ask, for instance, whether legal decisions that are influenced by decision makers' emotions are more or less likely than decisions not so influenced to rest on *proper bases*, to have been reached through *fair procedures*, and/or to *express values* that the legal system ought to reaffirm (see generally Adler 2000). Any of these more deontological criteria may also conflict in any given case with either the correctness or consequentialist standards.

Good and Bad Sources of Emotional Judgment

We may begin with the distinction between incidental and integral emotion sources. It might seem intuitively obvious that incidental emotional influence cannot be justified within any model of appropriate moral–legal judgment (Hastie 2001). Incidental emotion sources, like incidental non-emotional information sources, are simply irrelevant to the judgment task, and highly unlikely to further outcome criteria (i) or (ii) above, flatly contrary to criterion (iii), and unlikely to further legitimate consequentialist goals. Even if certain incidental moods or emotions might enhance outcome accuracy (criteria (i) and (ii)) – say, mildly negative affect, which would be predicted to lead to more careful decision making (Forgas this volume) – deliberately inducing this state by exposing decision makers to an incidental emotion source seems inconsistent with any plausible notion of properly based or fair judgment process, or of the values that legal judgment ought to express.[11] Granted, it may sometimes be difficult to separate incidental from integral emotion sources (cf. Wiener et al. 2006), especially since people may find it

[11]I would like to thank Bradley Wendel for helping me to think this point through. In addition, it has been argued that certain kinds of emotionality are desirable *traits* for legal decision makers to possess (e.g., Pillsbury 1999), even though the origins of those traits are necessarily incidental to the case at hand. Certainly, if some kinds of emotion are appropriate or even desirable for legal judgment, then the decision maker must have the capacity to experience those emotions and use

hard to identify that either has influenced their judgments (Haidt and Bjorklund 2008; Douglas et al. 1997). To the extent that an emotion can be traced to an incidental source, however, that emotion cannot improve legal judgment.

Some integral emotions cannot be justified under any plausible criteria of good judgment either. We need to distinguish between "legal" (or "evidential"; Alicke 2000) and "extralegal" (or "extraevidential") sources. Legal integral emotion sources would include, for instance, the nature of the case-relevant behavior of relevant persons and the outcomes of those behaviors (cf. Alicke 2000). Extralegal integral emotion sources would include a party's race or gender (where not relevant to a legal claim or defense), information learned about the case through pretrial publicity, spectator behavior in court relating to the case, and so on. These sources are integral because they have to do with the judgment target, broadly construed, and do not arise from factors completely unrelated to the target (cf. an experimental emotion-inducing film about an unrelated subject (Lerner et al. 1998)), but they are extralegal in the sense that they ought not to be taken as relevant to the moral–legal judgment. Emotional responses triggered by integral but extralegal factors, like those prompted by incidental sources, would seem to be normatively unjustifiable (Hastie 2001).

Of course, distinguishing some legal from extralegal sources can be problematic, since what "ought not to be taken as relevant" itself depends on what one accepts as criteria for good judgment. For instance, to choose arguably the most narrow focus, outcome criterion (ii) (what the relevant legal rules appear to require), consider character evidence. The rules of evidence draw rather complicated and sometimes uncertain lines between admissible and inadmissible evidence of a person's character (or of specific instances of conduct, not directly related to the current case, which may be taken as probative of character). To the extent that evidence of character traits (or custom or habit, for that matter) is considered relevant, we arguably have instances of legal but incidental information sources. Even if we say that their relevance makes them automatically integral as well as legal, there is the further issue that relevance may depend on how the evidence is introduced. Under Federal Rule of Evidence 404 (Federal Rules of Evidence 2008), for example, the defendant in a criminal trial may introduce evidence about his own relevant, positive character trait (e.g., for peacefulness) to prove that he acted in conformity with that trait during the events at issue, but (with certain exceptions) the prosecution may not introduce evidence about a corresponding negative trait (e.g., for violence) unless the defendant offers the positive character evidence first. So the evidence of

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them in his or her judgment process. (Phineas Gage would not make a good judge or juror.) It is also conceivable that jurors as "intuitive theologians" or "prosecutors" (Tetlock 2002) might want to consider incidental emotion sources (say, patriotic fervor in a flag-burning case or terrorism case) as a way of ensuring that their judgments will protect sacred community values or enforce deeply held social norms. I will take up an example of this in the first case study below, but plainly we have here an instance where my thin normative conception of emotions in legal judgment is inadequate, and broader and deeper dimensions beg to be considered.

the defendant's violent character is relevant (and therefore "legal") only if the defendant has first offered evidence of peaceful character. Needless to say, character and habit evidence can provoke powerful emotional responses.

Let us put these questions aside and focus only on indisputably integral, legal emotion sources, because it is the use of emotions from these sources that is most likely to be justifiable. The next section discusses the judgmental benefits and drawbacks of emotions from integral, legal sources.

Benefits and Drawbacks of Emotional Influence from "Good" Sources

Many psychologists have followed philosophers such as Adam Smith (1793) in arguing that at least some emotions are beneficial, if not essential, to at least some moral decision making. Antonio Damasio's (1994) *somatic marker* theory, based in his account of the well-known case of Phineas Gage as well as his own neuropsychological research, posits that the primary intrapersonal function of emotions is to help people to choose (appropriately) among and coordinate competing goals and values. Specifically, a person's experience of certain emotions (e.g., anger, sympathy, disgust) when confronted with a question of social judgment signals to the person both that the question involves moral values and the response to the question that will appropriately uphold those values. (For a brief review of studies critiquing Damasio's theory, see Pham 2007.) Emotions thus serve as "moral intuitions" (Keltner et al. 2006), and a large body of literature in moral psychology (e.g., Pizarro 2000; Sinnott-Armstrong 2008) explores this notion in detail.

Insofar as judgments of legal blame are moral as well as legal decisions, research on the psychology of moral judgments is relevant to our inquiry. There is also a growing legal academic literature, some of it grounded in psychology, on the supposed pros and cons of various emotions or emotions in general for different sorts of specifically legal decisions (e.g., Bandes 1999; for a review, see Maroney 2006). I will draw on all of this work in setting out, schematically and at a very general level, the judgmental benefits and drawbacks of legal decision makers' uses of their emotions.[12]

The major benefits of incorporating decision makers' emotional responses into legal judgment include the following: (a) The experience of a given emotion (anger, disgust, fear) may signal to the decision maker, to an extent that would not occur in

[12]I am mindful of Nussbaum's (1999, p. 21) admonition that these matters are typically so contextual that the reliability of emotions in general or any emotion in particular as a guide to judgment can be determined "only in the concrete. Anger as a whole [for example] is neither reliable nor unreliable, reasonable or unreasonable; it is only the specific anger of a specific person at a specific object that can coherently be deemed unreasonable." The case studies which follow give us an opportunity to evaluate the moral–legal wisdom of emotional judgment at a more concrete level.

the absence of the emotion, that a wrong has occurred that needs righting. (b) Another, related informational benefit of emotions to decision making is that they may incorporate moral or aesthetic values that may be difficult to articulate and that therefore would be insufficiently weighted or ignored if the decision maker tries to confine herself to ostensibly rational factors (Loewenstein and Lerner 2003). (c) The experience of the emotion may motivate the decision maker to take legally–morally justified action (award damages, punish, enjoin) that he or she would not otherwise take.[13] (All of these justifications can be inferred from the Supreme Court's opinion in *Old Chief* (1997), mentioned above.) (d) The experience of the emotion may provide an otherwise unavailable opportunity for the decision maker to adjust and thus arguably improve his or her moral principles in accord with the emotional signal (see Pizarro 2000). (e) Since decision makers are likely to experience emotions anyway in response to at least some trial information and are going to be inclined, based on their ordinary habits of thought in social judgment situations, to use those emotions in deciding, attempting to prevent them from using those emotions will likely (i) be futile, and/or (ii) lead to greater use of the emotions through reactance, and in any event (iii) convey the message to jurors that the law's ideal of decision making is so far removed from their ordinary habits of thought as to risk delegitimizing the process for them (cf. Holmes 1881/1963).

In addition, specific emotions may yield specific judgmental benefits. Sympathy, for instance, enhances perspective-taking, which can improve decision makers' understanding of case-relevant facts; moreover, because sympathy ordinarily has a mildly negative valence, it should lead to more careful processing of trial information (Feigenson 1997).[14] Anger, in the sense of moral outrage at an offender's disrespectful conduct, is arguably (under a retributive theory of justice) especially relevant to determining the punishment the offender deserves, as long as the anger is tempered by empathy for the offender's positive moral qualities (Pillsbury 1989).

The major drawbacks of relying on emotional responses even to integral legal sources when deciding moral–legal issues include the following: (a) Given the complexity of emotional experience and people's frequent lack of knowledge of the true sources of their emotions, responses ostensibly provoked by integral legal sources may too readily trigger or even be transferred from emotional responses to incidental, and therefore legally irrelevant, sources. (b) Strong emotions, regardless of

[13]Relatedly, Goodenough (2008) has argued that emotions can create internal commitments to behave later in a way that might seem irrational at the time but may make sense when considered strategically, in a broader context; e.g., the experience of moral outrage may serve as a kind of guarantee of a later behavioral tendency (the urge to punish) that may be normatively defensible. The opacity of moral intuition, Goodenough explains, serves as a kind of firewall against the undermining of that internal commitment by later, rational reconsideration.

[14]Particular emotions may benefit justice, not only by being used by the decision maker to decide a given case, but by being woven into the very fabric of law at a systemic level. For a persuasive argument on this point, see Gewirtz (1988). For taxonomies of the different roles that emotions may play in legal judgment and law generally, see Feigenson (2001); Maroney (2006).

valence or type, may impair careful consideration of other relevant trial information (e.g., Bandes 2007). (c) The signal provided by certain emotional experiences that there is a moral–legal wrong that needs and deserves righting (see above) may not be reliable, so that if decision makers rely on the emotion as a cue to moral–legal judgment, they may perceive a wrong where none has been committed (i.e., false positives) and/or may interpret the absence of a (strong enough) emotion as the absence of a wrong where one has been committed (i.e., false negatives). This may be due to the mismatch between the evolutionary adaptiveness of our emotional signals and the current decision making context (Loewenstein and Lerner 2003), especially the highly articulated and constrained context of formal legal decision making. (d) Emotional responses lead to congruency biases which distort subsequent perceptions of the facts and their legal significance in ways that mislead and confuse jurors and may be unfairly prejudicial to a party (cf. Federal Rules of Evidence 2008), leading to less accurate fact finding and judgment (Feigenson 1997; cf. Kahan and Nussbaum 1996). (e) Emotional responses used as a heuristic cue (affect-as-information) seem especially prone to lead decision makers not to consider carefully all of the relevant facts; the sense of satisfaction that comes with a decision that "feels right" may disincline the decision maker from evaluating the evidence more carefully and considering counterarguments.[15] (f) Decision makers who engage in affective forecasting are prone to be mistaken about both the intensity and duration of their future emotional states, and to the extent that they base their present judgments on those predictions, the judgments may go astray (Blumenthal 2005b; Gilbert and Wilson 2000; Wilson and Gilbert 2003). (g) Emotion-based moral–legal intuitions are even less likely than non-emotion-based ones to be subject to critical scrutiny and correction, since the sources of one's intuitions may be especially obscure to the decision maker yet the resulting intuitions may be especially firmly held (Haidt 2001, 2007). This would make it more difficult either to achieve an accurate outcome or to comply with the criterion of fair process.

Particular emotions pose their own distinctive threats to good legal judgment. Sympathy, for instance, is prone to various kinds of bias (salience of target, similarity between observer and target, unexpectedness of target's suffering), any of which may lead the decision maker to undervalue legally relevant or overvalue legally irrelevant facts (Feigenson 1997). Anger toward a person accused of a monstrous crime can generate an irresistible motivation to punish, overriding careful consideration of whether the evidence shows beyond a reasonable doubt that the defendant is actually guilty (Bandes 2007). Anger makes decision makers more likely to engage in heuristic, stereotype-driven thinking (e.g., Bodenhausen et al. 1994) and can exacerbate prejudice toward out-group members (see Lerner and Tiedens 2006). Disgust in particular tends to prompt automatic, irrational judgments that, being governed by a kind of "sympathetic magical thinking" grounded in a *contagion* heuristic (Rozin and Nemeroff 2002), are impervious to later rational modification

[15]For a brief review of the mechanisms through which judgments based on integral emotion sources come to "feel right" and be held more strongly, see Pham (2007).

(Haidt 2001). This means that disgust often sends an especially unreliable signal of the judgment target's disvalue.

Thus, at a general level, there are many reasons to think that emotions from integral, evidentiary sources may help or hinder good legal decision making. More concrete examples may help to focus the discussion.

Two Test Cases

In this section I examine two cases – one criminal, one civil – in which jurors' emotions may have influenced their judgments of legal responsibility or blame. In these cases, reasonable people could disagree about whether emotional influences helped or hindered good legal judgment, or whether other emotions that jurors probably did *not* experience might have improved jurors' judgment had they experienced them. For each case, I show how the psychological research helps us to think about whether emotional decision making was, or would have been, on balance a good thing.

Criminal Case

In June, 2007, Mychal Bell, a 17-year-old black, was convicted in his hometown of Jena, Louisiana of aggravated second-degree battery and conspiracy to commit aggravated second-degree battery in connection with the December, 2006 beating of a white fellow high school student, Justin Barker. A group of six black students including Bell attacked Barker from behind, knocking him out and stomping him, causing injuries to his face, ears, and hand. The beating climaxed several months of racial tensions in the small town, provoked by the anonymous hanging of three nooses from a tree in front of the high school the day after another black student asked if he could sit under the tree, where only white students usually sat (Jena Six legal case 2008).

The police arrested all six. Five were charged as adults with attempted second-degree murder. Bell's case was taken to trial. An all-white jury of six was empanelled.[16] On the first day, the judge reduced the charges to aggravated second-degree battery. This requires proof that the defendant used a "dangerous weapon" in the assault, so the prosecutor argued that Bell's sneakers, which he was wearing when he allegedly kicked Barker, were dangerous weapons. Testimony conflicted as to whether Bell had been the initial attacker and how much he had participated in the beating.

[16]There were no blacks in the venire for the Bell trial. Apparently the defense attorney, himself a black, did not challenge the composition of the jury pool because, in his experience, it was difficult to find black jurors in Jena. Blacks made up about 12% of Jena's population of 3,500 (Jena Six legal case 2008).

The jury deliberated 3 hours before convicting Bell on both counts. The convictions carried a sentence of up to 22 years in prison. Widespread protests and support for Bell and the "Jena Six" ensued. Ultimately Bell's conviction was overturned on appeal on the ground that he should not have been tried as an adult. After further developments, Bell was sentenced to 18 months in a juvenile facility.[17]

We do not know to what extent, if any, the jurors' emotions influenced their decision to convict the defendant Bell. It seems reasonable to suppose, however, that the jurors might have been affected by fear (of Bell, or perhaps all six of the young men, or the prospect of being victimized by crimes committed by black males generally), anger (at the perpetrators), and sympathy (for the victim, Barker), among other emotions. Indeed, it is hard to imagine that, in a racially charged trial in a largely segregated town in the Deep South, these and other emotions associated with in-group/out-group effects were not in play at some level.

It also seems very difficult to justify any of these emotional influences within any system of legal judgment in a democratic, multiracial society. Any fear and anger prompted by the defendant's case would seem especially likely to merge with and be amplified by incidental sources of those emotions – the pervasive race-consciousness of the culture – as well as with integral but legally irrelevant sources from pretrial publicity, since all of the jurors certainly knew about the case beforehand. Anger, as we know, would be predicted to encourage heuristic processing, reliance on stereotypical thinking, and greater punitiveness, none of which would serve the outcome accuracy or fair process criteria of good legal judgment. Moreover, when jurors' identification with an in-group is made especially salient (as white jurors' identification with their racial group likely would have been in such a racially charged case), jurors would be even likelier to feel anger toward the out-group (of which the defendant was a member) and to be inclined to take action against the out-group (see Mackie et al. 2000), exacerbating these problems. While fear, in itself, would not necessarily indicate heuristic processing, because its appraisal structure includes at least some uncertainty (about the prospect of an unfavorable event), when the fear is so closely associated with anger, there is no reason to think that it would operate as a counterweight to the cognitive and emotional inclinations that anger has prompted.[18]

[17]The other members of the Jena Six are still scheduled for trials. Barker, the victim of the attack, and his parents have also filed a civil suit against the five adult members of the Jena Six, their parents, and others.

[18]As noted earlier, fear may send a signal that the defendant is to be avoided, which jurors can accomplish by voting to convict him because they know that a guilty verdict may be followed by a prison sentence. This fear-based reasoning seems to be normatively irrelevant because deterrence, although a proper goal of law, is already taken into account by the criminal law and the consequences it provides upon a guilty verdict; jurors' task is simply to determine whether the defendant is guilty or not. On the other hand, it could be argued that jurors' fear signals that this case is an especially appropriate occasion for specific (or general) deterrence.

To the extent that angry (and fearful) jurors engaged in substantive processing of trial information, their emotions would likely lead them to do so in a biased fashion, in the direction of increased blame. In addition, if the merging of jurors' emotional thoughts about the facts of the case with their deep-seated incidental affective responses to racial issues put the latter in play, as suggested above, then according to appraisal tendency research, even if jurors were instructed to disregard all incidental sources of information and decide solely on the basis of the evidence presented at trial, those powerful incidental sources of emotion would continue to cause biased construals of the evidence (see Loewenstein and Lerner 2003).

But it seems at least as likely that jurors used their emotions as directly informative of the judgment to be reached, as described by affect-as-information theory. For instance, sympathy for the victim of the assault would be enhanced by their common race (similarity effect; see Feigenson 1997), and greater sympathy for the victim would correlate with greater anger toward the defendant (Feigenson et al. 2001), amplifying rather than tempering the biasing effects of the anger. In the Bell trial, as already noted, jurors might well have been unable to separate the emotions they experienced in thinking about the case from (what should have been) the incidental emotion source comprised of their beliefs and attitudes about race relations generally; therefore, they would have continued to regard their emotions as task-relevant and as a possible judgmental cue. Furthermore, their emotional thoughts about the case were very likely stronger than those overridden by accountability instructions in an experimental setting (Lerner et al. 1998), making it all the more probable that their emotions influenced their verdicts despite judicial instructions to the contrary and their awareness that they would be accountable (to the court and to the public) for their decision. Indeed, accountability may have amplified rather than moderated (or failed to moderate) the punitive tendencies motivated by anger. Insofar as one of the social functions performed by the moral emotions is to recognize and secure ingroup loyalty (Haidt 2007), accountability to their (presumably mostly) white friends and neighbors might have promoted a verdict punishing the black defendant and vindicating the white victim.

In addition to emotional responses to the case and the principals (Bell and Barker) in general, jurors' sympathy (for Barker) and anger (toward Bell and perhaps the other assailants) may also have been elicited by the emergency room photographs of the injured victim which the prosecution displayed during closing argument (Associated Press 2007). While not as gruesome or revolting as the crime scene or autopsy pictures often shown in homicide trials, which have been proven experimentally to provoke emotional responses that influence verdicts (e.g., Bright and Goodman-Delahunty 2006), the pictures of the victim's bruised face, with one eye swollen shut, may well have increased not only the intensity of jurors' anger but the strength of the action tendency associated with that emotion – a retributive urge to strike at the perceived source of the anger. In short, to the extent that jurors' emotions affected their verdicts, they are likely to have impaired the defendant's ability to receive a fair trial by decision makers prepared to consider the evidence and the law in a careful and unbiased fashion.

On this analysis, the predominant emotions that the Jena jurors are likely to have experienced all pointed the same way, toward convicting the defendant, and it also seems probable that those emotions did play some role in leading jurors to their verdict. If that is right, what possible arguments could there be in favor of emotional decision making in this case? Perhaps the normative problem with the role of emotions in the Mychal Bell trial is not that they may have affected the verdict, but that only an incomplete and biased subset of the relevant emotions were involved. That is, if we assume that emotions were bound to figure in a racially charged case in which most members of the community had a strong personal interest, then rather than engage in the possibly futile exercise of trying to exclude or drastically limit emotion-based decision making (to be discussed further in the next section), the better way to ensure the fairest possible trial would have been to encourage *other* emotional responses as counterweights to the ones discussed above.

For instance, other potential jurors – perhaps especially but not exclusively blacks – might have to some extent shared the anger, fear, and sympathy likely to have been felt by the actual jurors, but they might also have felt anger or indignation at the white district attorney or at the white-dominated criminal justice system in general.[19] The conduct of the prosecutor could be regarded as an integral, albeit extraevidential, emotion source, since the case would not have proceeded as it did but for his discretionary decisions (both later overturned) to charge Bell as an adult and with second-degree attempted murder. Just as some have advocated jury nullification in minor drug possession cases brought against black defendants (Butler 1995; for a discussion, see Marder 2002) in the broader interest of justice, so it could be argued that a juror's anger at the prosecution of the case is a justice-relevant signal that there was a wrong (the fact that Bell was on trial as an adult and for a charge disproportionate to the actual offense) caused by human agency (the district attorney's decision rather than the impersonal "law") and in need of redress. Relatedly, other jurors might have felt more sympathy for the defendant, Bell. Even assuming that these jurors did not also feel less sympathy for the victim of the attack, Barker, the competing pulls of sympathy for both the defendant and the person whose injuries the prosecution was seeking to vindicate could well have baffled the effects of sympathy on judgment (cf. Feigenson et al. 2001), leading to less reliance on prior knowledge frameworks (stereotypical thinking) and more careful consideration of the facts of the case, in line with standard normative criteria of good legal decision making.

[19]Following the noose incident, three white students were found responsible for hanging the nooses and the principal recommended they be expelled. The superintendent of schools, however, overruled the decision and gave the students 3-day suspensions. In response, several black students, among them star players on the football team, staged a sit-in protest under the tree. An all-school assembly was convened. Arriving at the school escorted by armed police guards, District Attorney Reed Walters criticized black students for making too much of a "prank" and said, "I can be your best friend or your worst enemy. I can take away your lives with a stroke of my pen" (Holland and Lanier 2007).

Given the criteria of good judgment sketched earlier, the case for using these other emotions, considered by themselves, to reach a just decision in the case of Mychal Bell seems modest at best. Reliance on indignation prompted by an extra-evidential and possibly incidental source (the prosecutor's pretrial conduct), for instance, seems very difficult to justify in terms of most criteria for good judgment. Assuming, however, that these emotions would be *competing* with those described earlier (the ones I am hypothesizing that the actual jurors experienced), the resulting equivocation in emotional responding, by leading to more careful thinking about the facts, could promote greater accuracy of outcome (however that is measured), as well as a fairer decision making process. And in terms of the expressive-values criterion of good legal decision making, it may be a good thing to rely on one's anger or indignation at the prosecutor if those emotions are sending a reliable signal about the true source of injustice in the case. To be sure, whether resistance to perceived racism (by refusing to accede to a possibly racially selective prosecution) is more important than maintaining social order (by convicting someone guilty of a violent assault) would itself be a hotly contested question, and it may well be debated whether the courtroom, as opposed to the political process, is the proper forum for thrashing it out. That said, if broader social and cultural values inevitably play a role in jurors' thinking in racially or otherwise politically charged cases like Mychal Bell's, then widening the range of values considered would itself seem to serve the criterion of enhancing law's expressive value as well as that of fair process.

Civil Case

For sake of contrast, I choose a civil case in which the problem is not that decision makers' strong initial moral–emotional responses might have unduly influenced their decisions. Rather, this is a case in which the baseline response might well be no strong moral–emotional intuition at all. The propriety of emotional decision making in this situation should, therefore, involve a very different calculus.

Before Enron, one of the largest financial fraud cases in American history was the one brought by the Securities and Exchange Commission against James Koenig, former Chief Financial Officer, and certain other officers of Waste Management, Inc., the nationwide trash hauling and disposal company (*Securities and Exchange Commission v. Koenig* 2007).[20] The SEC contended that for several years Koenig had engaged in a series of complex accounting schemes intended to understate corporate expenses and thus increase reported profits. Corporate accounting is supposed to be

[20]The account of the case is based on this and subsequent opinions, as well as transcripts of the parties' opening statements and closing arguments (*SEC v. Koenig*, No. 02 C 2180 (N.D. Ill. 2006)) and copies of the SEC's visual displays kindly provided to me by Bob Pommer and Jack Worland, lawyers for the SEC. I am also grateful to Chris Ritter of The Focal Point, trial consultant to the SEC in this case, for discussing the case and his visual work with me.

performed in accordance with generally accepted accounting principles (GAAP) and other standard accounting rules. Koenig, the SEC charged, had departed from these principles in his treatment of depreciation, capitalization of interest, and several other aspects of the business, ultimately leading to a $1.4 billion restatement (a public readjustment of past financial statements). Koenig denied any wrongdoing.

In response to a complex and conflicting tale of corporate accounting practices, jurors might well have no strong intuitions at all. Surely jurors knew that accounting fraud was a wrong, but whether the defendant's conduct constituted fraud was not obvious, and would depend on one of the least intuitive sets of behavioral norms – generally accepted accounting principles. The trial would take nearly 2 months, during which jurors would be barraged with accounting minutiae and inconsistent testimony. How (if at all) might jurors' emotions play a role in their judgment process, and in particular, should efforts by counsel to elicit their emotions, if successful, be regarded as a good or a bad thing?

It is hard to say whether incidental sources of emotion may have influenced jurors' judgment. By the time the case went to trial, jurors had no doubt heard of Enron, Tyco, and other highly publicized corporate fraud cases of the late 1990s and early 2000s, but not of the case they were asked to judge. The defendants in the more highly publicized cases might well have created a comparison class for the evaluation of the target, Koenig, but whether this would lead to assimilation effects (i.e., Koenig is another corporate miscreant and should be punished like the others) or contrast effects (i.e., Koenig's conduct is at worst a much less egregious instance of corporate officer wrongdoing and so he should be treated more leniently) is difficult to say (e.g., Schwarz and Bless 1992); in any event, assimilation and contrast effects need not be emotional. And whatever motivation to process trial information carefully their initial curiosity or even anxiety might have inspired, jurors might have found it hard to sustain that motivation over several weeks of often highly technical testimony.

The plaintiff SEC's trial strategy, both in words and in pictures (projected on a large courtroom screen during opening statement, witness examinations, and closing argument), was to simplify the otherwise difficult and boring technicalities of accounting practices and, where possible, to tell simple stories of what the defendant did that made his culpability clearer. Some of these words and pictures seem to have been designed to elicit jurors' contempt and anger or indignation toward the defendant, Koenig. For instance, one of the major issues in the case concerned how Waste Management depreciated its assets. A part of the SEC's argument on this point was its claim that Koenig had deliberately and persistently inflated the salvage values of Waste Management's trucks and other equipment so that the company could report lower depreciation expenses and, hence, higher profits. Koenig decreed a high salvage value for the trucks and then set about to substantiate his number – to fit the facts around the policy, as it were. Two financial analysts couldn't substantiate the figure, and then a third wrote a memo about it, concluding that "salvage values [are] aggressive" – accountant-speak for *too high*.

All of this appeared on a large diagram. Then Koenig's picture was added to the display, with a large "!?" indicating his response to the memo. As the SEC lawyer

explained to jurors that Koenig ordered all copies of the memo to be collected and destroyed, a picture of a locked black box appeared next to Koenig's picture. As a familiar verbal trope, "black box" means something hidden from outsiders; this box, moreover, looked a bit like a treasure chest or safe, implicitly associating Koenig with the hoarding of not only secrets but money. Finally, in a corner of the diagram, a cartoon showed what Koenig did next: He ordered one of the other financial analysts to go to the memo-writer's office and stand over him while the latter deleted the memo from his hard drive. The whole story was now visible: how responsible employees tried to determine whether there was support for Koenig's salvage values, how they honestly concluded that Koenig's numbers were too high, and how Koenig sought to suppress that information. The SEC lawyers wanted jurors to conclude from this episode, regardless of whether they had absorbed all of the niceties of accounting practice, "That can't be legal!" In other words, they invited jurors to develop a moral–emotional intuition that the defendant's behavior was wrong.

Let us assume that the SEC's presentation prompted jurors to feel anger or indignation and contempt toward the defendant, or at least a degree of each that they would not have felt had they not seen the visual display. I assume that these integral emotions may have influenced jurors' decisions both directly, by prompting at least tentative judgments of blameworthiness, and indirectly, by feeding back to influence construals of subsequently presented evidence (very likely, since jurors first encountered the visual display during the SEC's opening statement).

The risks that these emotions would pose to good judgment follow from the general observations about emotional effects outlined above. First, any anger or contempt that jurors may have felt toward the defendant in this case could have been confused with, and perhaps sustained by, similar emotions felt toward the defendants in other then-recent corporate fraud cases, increasing the risk of decisions based on irrelevant incidental sources. Second, although the kind of anger that jurors may have felt toward the defendant is unlikely to have been the stronger, more primitive sort of emotion, mixed with fear and revulsion, that they might feel toward someone who committed a brutal murder or rape, it might still have led to a greater disposition toward punitiveness than the case warranted. Third, any currently experienced emotion could well have biased jurors' consideration of the complex, disputed, and *ambiguous* evidence subsequently presented – precisely the kind of situation in which emotional processing is likeliest to distort judgment (cf. Keltner et al. 1993). Fourth, readily accessible feelings of antipathy toward the defendant might well have disinclined jurors to reevaluate their earlier impressions of the defendant's behavior and made them less amenable to the sort of reasoned counterargument that the law favors (and that is expected to take place during deliberations).

Given this, how could jurors' contempt for or anger toward the defendant possibly have improved their legal judgment? Consider four possible reasons. First, jurors' emotional involvement may have heightened their attention to the facts of a complex, difficult, and frankly sometimes boring case. This may have led to a net increase in their retention and use of case-relevant information in making their

ultimate decisions, which would be predicted to enhance outcome accuracy (by any measure) as well as the goal of fair process. And while anger (if not contempt) is ordinarily associated with less careful, more heuristic processing of information, there would seem to be less danger of that in this case because the length of the trial, the amount of information, and the degree of mental effort obviously required to stay on top of it would itself tend to discourage heuristic processing (if not also to attenuate emotion effects generally; see Feigenson et al. 2001).[21]

Second, by prompting emotional responses, the SEC's presentation may have helped jurors to make sense of the complicated facts by cueing narrative frameworks and conventions with which jurors were familiar (story knowledge; cf. Pennington and Hastie 1993) and which they could have used as guides to the appropriate moral response in this case as well. Depreciation, salvage values, and other aspects of accounting may be foreign concepts to many jurors, but stories about people who have something to hide and go to great lengths, even enlisting others, in their efforts to conceal the truth are not. According to the SEC, to understand what the defendant Koenig did is to appreciate that it was wrong; telling the story of the case so as to appeal to jurors' moral–emotional intuitions (without, of course, misstating or misrepresenting any of the facts in evidence) enhanced jurors' understanding of the case. The counterargument to this, of course, is that the narrative frameworks that jurors' emotions would prompt could mislead them as they tried to understand the legal significance of the defendant's behavior (cf. Dershowitz 1996).

Third, jurors' emotional responses may have helped them to appreciate the seriousness of the defendant's offense (if they were to conclude that he violated the law). In many criminal cases the harm, and hence the seriousness of the offense, is quite obvious. Even in some other accounting fraud cases, the proven financial suffering of many investors would make the seriousness of the offense intuitive. In those cases, jurors' intuitive sympathy for the victims would send a justice-relevant signal, that the suffering was undeserved and should be alleviated (see Feigenson 1997). In the absence of such a natural signal, however, jurors might properly be prompted to experience a somatic marker (Damasio 1994) pointing to the wrongfulness of the conduct and hence the need for punishment. If that is so, then jurors' contempt and anger would have helped them to decide the case in a way that fulfilled their role as defenders of the social order (i.e., acting as "intuitive prosecutors"; see Tetlock 2002). More specifically, contempt provided a signal that the defendant had failed to carry out his duties to the community (in this case, by conducting the company's business in an honest fashion), while anger signaled that the

[21] Jurors might also be inclined to resort to heuristic processing if the facts of the case were just too hard to understand substantively (see, e.g., Cooper et al. 1996; Sanders 1998). This tendency would be reduced if the SEC's words and pictures succeeded in making the intricacies of accounting practices intelligible.

defendant had violated the rights of others (e.g., shareholders or others who may have been financially damaged by the accounting fraud, and whose right to receive and act on honest and accurate information provided by the company was also infringed) (Rozin et al. 1999).

The argument that this use of emotion is just may be stronger if the path of emotional influence on judgment is affect-as-information. In the direct-effects studies described in the preceding section, emotion mediates the effect of the case-relevant variable (e.g., injury severity or a party's blameworthiness) on outcomes. Sometimes the mediating effect is in a direction consistent with legal norms – increasing the plaintiff's blameworthiness ought to increase the percentage of fault that jurors attribute to the plaintiff, and if the process by which they do so involves emotional thinking (Feigenson et al. 2001), then those emotions have been enlisted in the service of good legal judgment. In other studies, however, emotion mediates and thus facilitates an effect contrary to legal norms; for instance, where emotional responses to visual evidence lead to greater punitiveness, holding all other case information constant (Bright and Goodman-Delahunty 2006). If we assume that the evidence in the Koenig case supported the conclusion that he violated the law, then any emotional mediation of jurors' understanding of the evidence on their verdicts would have served to enhance good judgment. If, however, jurors' anger or contempt toward the defendant biased their construal of ambiguous and evenly balanced evidence against him, as predicted by appraisal tendency theory, this argument in favor of jurors' reliance on their emotions would be undermined. Given the difficulty of teasing apart these two paths of emotional influence, that is a real possibility.

Fourth, and relatedly, anger and contempt toward the defendant could well have motivated jurors to act on their perceptions of where justice lay. This would have led them not only to be more confident in finding the defendant liable – in the approving words of the Supreme Court in *Old Chief v. United States* (1997), the SEC provided jurors with a "story of liability" that convinced them of the moral reasonableness of a verdict that the defendant was liable – but also to assess damages commensurate with the full extent of the harm that the defendant caused. Emotion would thus help to correct for any contrast effect (see above) which might have inclined jurors not to find the defendant liable or not to award appropriate damages if Koenig's misconduct struck them as less egregious than that of the defendants in the Enron, Tyco, and other corporate scandal cases.

Both of these case studies illustrate that, at least in some instances, decision makers' emotional responses to the facts of the case (and the ways in which those facts are presented) may promote as well as impair good legal judgment, and that it may not be easy to decide which set of effects outweighs the other. That would depend on (among other things) the criteria for good judgment that we prefer, and on highly disputable inferences from a relatively small number of experimental studies to the rich details and overlapping legal, cultural, and moral contexts of decision making in actual cases.

What to Do About It

Correcting for Unwanted Influences Generally

To the extent that any emotion effects on judgments of legal responsibility are considered undesirable, what does the research show about decision makers' ability to reduce or eliminate those effects? Generally speaking, the research on *debiasing* (or *correction*) indicates that in order to purge judgments of unwanted bias, the decision maker must be: (i) aware of the unwanted bias and its magnitude and direction; (ii) motivated to correct the bias; and (iii) able to adjust the response appropriately (Wilson and Brekke 1994; Wilson et al. 2002).

Legal decision makers may fail to satisfy any or all of these criteria. First, decision makers may perceive no need to correct for bias. They are likely to remain unaware of many sources of unwanted influence on or "mental contamination" of their decision making. People usually believe that their own thinking and judgments are unbiased (Ehrlinger et al. 2005).[22] But the problem may be worse with regard to emotional influences. As Douglas et al. (1997) found, mock jurors may remain completely unaware that their verdicts have been influenced by their emotional reactions to evidence. And generally speaking, the fact that affective processing is often associated with intuitive, "System 1" cognition (Kahneman and Frederick 2002) makes it less likely that jurors would be aware of its effects on their decision making.

Second, some legal decision makers may not be sufficiently motivated to correct for any emotional influence, believing that taking into account at least certain emotional responses – such as their sympathy for accident victims – is proper, notwithstanding the judge's instructions to the contrary. Third, decision makers may not know how to adjust appropriately even if they correctly perceive the need to debias and are motivated to try. Typically they undercorrect (Wilson et al. 2002), as one might expect based on the anchoring-and-adjustment process generally, but decision makers who are made highly aware of their feelings and are highly motivated to reach a fair and accurate decision may actually overcorrect for emotional influences (Berkowitz et al. 2000). On the other hand, judicial instructions to disregard emotional influence may lead to a "paradoxical" effect in which that influence is enhanced, not diminished, due to the increased availability of the proscribed influence (Edwards and Bryan 1997) or jurors' reactance (Lieberman and Arndt 2000).

This does not sound promising. Yet some research indicates that the legal decision-making process may be structured to reduce the impact of emotional influences, whether derived from an initial moral–emotional response (Alicke 2000; Haidt 2001, 2003,

[22] In addition, decision makers may be unsure whether their judgments are biased because they don't know whether they may already have subconsciously adjusted or corrected for potential bias (Wilson et al. 2002).

2007) or from emotions elicited later in the case. Regarding the first step in debiasing, jurors can be made more aware of unwanted emotional influences on their judgments. Standard judicial instructions now inform jurors: "Your verdict must be based absolutely and solely upon the evidence … You should not be swayed or influenced by any sympathy or prejudice for or against any of the parties" (Wright and Ankerman 1993). This implicitly makes jurors aware of the possibility that their emotions might influence their judgments, but in the same breath it encourages them to discount that possibility ("I will follow those instructions and not be biased"). An alternative instruction (discussed below) that more forthrightly and specifically addresses the likelihood of emotional influence could help jurors both to confront the unwanted influence and to do something constructive about it.

Second, studies (DeSteno et al. 2000) suggest that instructing jurors to consider the evidence carefully (as under current practice) may moderate emotional influences on judgment by giving jurors motives to reduce those influences. In addition, research shows that instructions that explain the legal justification for a rule are likelier to be followed than instructions lacking an explanation (Diamond and Casper 1992; but cf. Pickel 1995). This suggests that admonitions regarding jurors' use of their emotions that explain why the law discourages that use may effectively moderate emotional influences. Furthermore, as noted earlier, Lerner and her colleagues found that being aware that one will be accountable for one's decision attenuates the effect of incidental emotional influence on that decision, specifically, anger leading to punitiveness (Lerner et al. 1998; Lerner and Tetlock 1999). Conversely, Horowitz et al. (2006) found that in a case in which jurors might be inclined to express their sense of justice by nullifying (i.e., euthanasia as opposed to murder for profit), giving jurors nullification instructions increased jurors' emotional responses to the case and left more room for those emotions to affect their verdicts. Thus, the judgment task can be structured to reduce (or enhance) emotional influences.

Trials as currently conducted are bound to prompt jurors' emotions and those emotions are likely to influence their judgment. Yet despite (i) Anglo-American law's foundational commitment to trials based on live witness testimony in an adversarial environment, (ii) the frequency of cases that are inherently at least somewhat emotion-provoking, and (iii) people's natural (and often functional) tendency to use their emotions in making everyday moral judgments, the trial process is already fairly well structured to avoid at least some unwanted emotion sources and/or to reduce their impact on judgment. Given the difficulties of debiasing, and especially of calibrating the attempted correction effort to a bias of unknown magnitude and the possibility of overcorrection by jurors highly motivated to decide fairly and accurately, the most promising path may be to structure the judgment context – in terms of the available information, the manner in which that information is presented, the definition of the judgment task, and the opportunity for useful deliberation – so as to exclude emotion sources ("The best way to avoid biased judgments … is exposure control" (Wilson et al. 2002, p. 195)) and to attenuate any emotional influences, rather than to put too much weight on simply telling jurors to "just say no" to emotions they have already experienced.

Limiting Emotional Influences at Trial

Let us walk through the trial process and note both the (limited) efficacy of what the legal system already does to avoid unwanted emotional influences and any different steps that might be taken to further that goal.

Pretrial

In high-profile cases, restrictions on attorney statements to the media (by professional rule and/or judicial order), continuances, changes in venue, and admonitory instructions to jurors not to read or watch media coverage have been tried as ways of reducing the amount and potential impact of incidental and integral but extraevidential emotion sources. These kinds of steps, however, are not likely to be very effective. Attorney statements, even if constrained, are only a small part of the pretrial publicity available to potential jurors in high-profile cases. Continuances, which have been experimentally shown to reduce the biasing effects of some pretrial publicity, do not help to correct for the effects of emotional as opposed to factual information (Kramer et al. 1990; Kerr this volume). Changes in venue to locations where the jury pool is significantly less likely to have been exposed to pretrial publicity are not routinely granted in criminal cases. And most research indicates that judicial admonitions not to be influenced by pretrial publicity are ineffective (for a review, see Lieberman and Arndt 2000).[23]

Voir Dire

During voir dire, members of the jury venire likeliest to be influenced by incidental or integral emotion sources can be excluded by challenges for cause or peremptory challenge, whether because those potential jurors have been exposed to and recall more incidental sources and/or are predisposed to be affected by their emotional responses to the case regardless of their source. Of course this method is not foolproof. Because voir dire depends largely on jurors' self-disclosure, some jurors may be empanelled who (whatever they may profess in response to questions at voir dire) have been exposed to (substantial) incidental emotion sources and are likely to be influenced by them and/or who may be especially unwilling or unable to put their emotions from integral sources aside (see Lieberman and Arndt 2000).

As argued in the criminal case study above, however, the most promising way to reduce the unwanted impact of certain emotions (integral as well as incidental),

[23] After the jury is empanelled, the trial judge has broad discretion to protect jurors from improper extraevidential influences, including sequestering the jury (American Bar Association 2005). Sequestration can be effective in insulating jurors from media sources of information about the trial or information conveyed by family and friends, but due to the burden it imposes on the jurors it is ordered infrequently.

at least in cases where strong emotional responses that blur the line between integral and incidental sources are expected, may be to increase the chance that other emotions will compete with them and baffle their effects. If so, one way to do this in a case such as the criminal case study above, where emotional responses may be correlated with juror demographics, is to enhance juror diversity by more strictly enforcing at voir dire the rule of *Batson v. Kentucky* (1986) and subsequent cases, prohibiting the discriminatory use of peremptory challenges to strike jurors on the basis of race or gender.[24]

The Courtroom

The courtroom and the people in it may provide additional incidental or integral but extraevidential emotion sources. Consider, for instance, spectator behavior. In homicide trials, members of the victim's family have attended wearing buttons with the victim's picture (*Carey v. Musladin* 2006); in a rape trial, supporters of harsher penalties for convicted rapists attended wearing buttons proclaiming "Women Against Rape" (*Norris v. Risley* 1990). Trial judges can easily avoid these improper influences on juror decision making by simply banning these sorts of visual displays from court. No countervailing interest (e.g., the spectator's First Amendment right to free speech) comes close to outweighing the defendant's right to a fair trial uncontaminated by unnecessary sources of extraevidential information.

A somewhat more problematic source of integral but extraevidential information at trial is the potentially emotion-provoking sight of a criminal defendant shackled or dressed in prison garb. The Supreme Court has found that in the penalty phase of a capital case, the appearance of the convicted defendant in shackles is almost certainly prejudicial because it implies that he is a danger to the community, one of the factors jurors may take into account in deciding whether to sentence the defendant to death or life imprisonment (*Deck v. Missouri* 2005). The potential prejudice in this case is a mixture of non-emotional cognitions (if he is shackled, he must be dangerous) and emotional ones (perceived dangerousness may provoke fear, and/or the shackles may prompt loathing or disgust). The Court, however, held that shackles might be justified by security or other concerns, to be weighed by the trial judge on a case-by-case basis, and so courts may sometimes be less willing to prevent this sort of threat to good and fair judgment than they ought to be with regard to the spectator visual displays discussed above.

Finally, judges have only a limited ability to control the kinds of integral but extraevidential sources of emotion created by parties' appearance and demeanor. While lawyers presumably advise their clients to dress and conduct themselves in

[24] Although many observers believe that trial judges since *Batson* have been too ready to accept prosecutors' ostensibly race-neutral justifications for their uses of peremptories to strike minority jurors, rendering *Batson*'s prohibition largely ineffective, the Supreme Court's recent decision in *Snyder v. Louisiana* (2008) suggests that it may not be as easy for prosecutors to get away with pretextual justifications for peremptory challenges that remove minorities from the jury.

court so as to create a favorable impression, the parties must appear somehow or other, and it is hard to imagine judges instructing them how to dress and behave (except as needed to maintain courtroom decorum). For instance, a severely injured accident victim has as much a right to attend the trial of his negligence claim as does any other party, and if his injuries are obvious (e.g., a paraplegic or a serious burn victim), they are bound to provoke emotional reactions by jurors.[25] It is equally hard to imagine jurors ignoring a criminal defendant's demeanor at counsel's table throughout trial – anecdotal evidence supports this common sensical supposition – especially when jurors are explicitly encouraged to consider the demeanor of witnesses (including, of course, the defendant if he takes the stand) as an indication of their credibility. To some extent, then, integral but extraevidential emotion sources are inherent in the nature of a live trial, conducted in open court.

Opening Statements

Although jurors will have learned something about the case during voir dire, and in high-profile cases, before trial as well, their first detailed exposure to the facts of the case – and thus to emotion sources that are both integral and "evidentiary" in the broad (but not in the technical legal) sense – will come during the lawyers' opening statements. Given the potential anchoring effect of jurors' initial moral–emotional intuitions, judges who want to minimize the role of emotions in jurors' ultimate judgments should limit the presentation of especially emotion-provoking information at this stage, whether in words or pictures. Traditional rules of trial practice prohibit lawyers from arguing explicitly during opening statements (e.g., Tanford 1993), and to the extent that the kinds of recitations of facts and claims suitable to opening statements are less likely than overt arguments to appeal to jurors' emotions, these rules might limit emotional influences somewhat. Even non-argumentative representations of facts can be emotionally compelling, however, and the line between argument and mere statement of facts is often difficult to maintain.

An even greater challenge to efforts to reduce emotional influences at the earliest stages of trial is that lawyers are increasingly augmenting their opening statements with pictures, including emotion-provoking ones. These typically consist of large-screen projections of photographs pre-admitted or to be admitted into evidence, although they may instead consist (as we saw in the civil case analyzed above) of dozens or even hundreds of visual aids – graphs, flow charts, timelines, tables, and other illustrations – offered to clarify the lawyer's entire theory of the case (e.g., Sherwin et al. 2006; Feigenson and Spiesel 2009). The prosecution in a murder trial, for instance, may show during opening statement a photograph of the

[25] I would like to thank Valerie Hans for prompting this observation by sharing with me an account of a trial of this sort.

victim in her everyday life. This is very likely to elicit jurors' sympathy, which may shape their initial moral–emotional response to the case (sympathy for the victim, anger toward the defendant), which in turn may affect their ultimate judgments to the extent that jurors rely on their emotions as directly informative of the proper verdict (affect-as-information) or their evaluation of the evidence to be presented is biased in the direction of the emotion's cognitive structure (appraisal tendency). So if the legal system wants to reduce emotional influences on jurors' judgments, it would seem that these visual displays should not be permitted during opening statements.

On the other hand, several reasons argue against any per se exclusion. The incremental emotional impact of a photograph over and above the lawyer's (acceptable) verbal recitation of emotion-provoking facts may be unclear. Visual displays (especially of the diagrammatic sort employed in the civil case studied earlier) may help jurors to pay attention to and understand the facts of the case, and that helpfulness may not be (substantially) outweighed by the risk of unfair prejudice to the opponent resulting from any emotional impact (cf. discussion of Rule 403 below). Finally, and to extend the point made regarding voir dire, where the costs of excluding sources of "emotional contamination" seem excessive, the adversarial system is fairly well suited to countering the unwanted effects of emotional influence by offering opposing emotion sources: The opposing attorney may offer his or her own visual displays and/or verbally critique the first lawyer's displays, attenuating the impact of the initial emotion.

Evidentiary Phase

As every lawyer knows, the rules of evidence reflect a set of complex and not altogether coherent compromises among the sometimes competing goals served by jury trials (see, e.g., *Michelson v. United States* 1948), including (most importantly for the present purposes) the desire to conform juror decision making to a normative legal model of rationality and the need to accommodate jurors' everyday habits of thinking and feeling. Some of these rules can be understood as (among other things) imposing limits on the admissibility of evidence likely to prompt decision making on impermissibly emotional bases. I will consider two examples that illustrate some of the difficulties of trying to root out these emotional influences.

Under Rule 404(b) (Federal Rules of Evidence 2008), evidence that a person (typically a criminal defendant) has engaged in other acts than those involved in the current charges (typically, prior criminality or other wrongdoing) is admissible for a wide range of purposes – to prove motive, intent, knowledge, modus operandi, or other features of the current charges – but not to prove that the person has a particular character trait for the purpose of showing that he acted in conformity with that trait on the occasion that gave rise to the current charges. The problem with using prior bad acts evidence for the latter purpose is twofold. Jurors may impermissibly infer that because the defendant is the kind of guy who commits that sort of bad act, it's more likely than it would be without that evidence that he also did the bad act

with which he is currently charged. The prior acts evidence may also arouse jurors' anger or disgust toward the defendant, making them likelier to want to convict him because of the way they feel about him (affect-as-information) or by biasing their interpretations of the facts and the law (appraisal tendency). So Rule 404(b) attempts to proscribe both non-emotional and emotional influences on judgment (while permitting other inferences – e.g., the defendant intended to sell drugs before, therefore he intended to sell drugs on this occasion, too – that may be very difficult to distinguish from the impermissible ones; see, e.g., Mueller and Kirkpatrick 2003).[26] A judge who wants to reduce emotional influences should be less inclined to admit prior acts evidence, at least where it is unclear whether the evidence fits within one of the permissible uses under the rule.

The limited research relevant to this question (Edwards and Bryan 1997), however, suggests that prior acts evidence may not be too important a source of unwanted emotional influences. First, Edwards and Bryan (1997) found that only when this evidence was especially emotion-laden and when participants had been instructed to ignore it (i.e., it had been ruled inadmissible after being introduced by a witness) did the evidence strongly influence participants' judgments of guilt (and sentencing recommendations). Second, by resolving questions of admissibility under Rule 404(b) before trial or during trial but before the evidence is introduced, as judges typically do, there should not be much need for instructions to ignore inadmissible prior acts evidence and thus not that many occasions for those instructions to amplify the effects of emotion on jurors' judgments.

The rule most widely invoked for managing emotional (as well as improper non-emotional) influences on judgment, applicable to almost all sorts of evidence (and, by analogy, to opening statements and closing arguments), is Rule 403, which provides that even relevant evidence may be excluded if its probative value is substantially outweighed by the danger that it will cause unfair prejudice or confusion, mislead the jury, or otherwise impair proper decision making (Federal Rules of Evidence 2008). It is Rule 403 on which trial judges rely in determining whether to admit, for instance, crime scene or autopsy photographs in criminal cases or day-in-the-life movies in personal injury cases. I have already discussed the research showing that crime scene photos can provoke emotional responses that affect verdict preferences, and I have briefly discussed the use of photos of the injured victim in the criminal case study above. Here I want to ask more broadly whether the potential emotional impact of such visual displays should lead more often or even routinely to exclusion under Rule 403.

If emotional influences are to be rooted out, visual displays like these may be the primary target. Not only are pictures more likely than words alone to prompt emotional responses, but for a variety of reasons jurors are unlikely to be aware of the true sources of those responses or the extent to which their emotions may influence

[26] That is to say, bad acts evidence is an incidental emotion source if inadmissible, but the same evidence becomes not only integral but evidentiary if it can be fitted within one of the permissible uses specified in Rule 404(b).

their subsequent judgments (Sherwin et al. 2006). In criminal cases, for instance, research shows that gruesome pictures may lead to guilty verdicts on improper grounds – for instance, by lowering the standard of proof to which jurors hold the prosecution's case (Kassin and Garfield 1991). This would seem to reflect the affect-as-information path of emotional influence: Rather than interpreting ambiguous evidence in line with the appraisal structure of anger or disgust (say), these mock jurors seem to have taken their emotion as directly informative of the judgment to be reached (a guilty verdict), and then "reverse-engineered" an interpretation of the relevant law to fit that judgment, in accordance with cognitive consistency theory.

In both criminal and civil contexts, judges who now routinely admit vivid pictures of these sorts ought to consider much more seriously than they seem to now whether, given alternative forms of proof (usually, oral testimony), the marginal probative value of the crime scene photo in proving the cause and nature of the fatal injury, or the day-in-the-life movie in proving the extent of the accident victim's pain and suffering, is really worth the risk of emotionally influenced decision making. On the other hand, to return to arguments previously made, countervailing interests recommend against any major change in the way that Rule 403 is applied to this sort of visual evidence. First, the pictures may provide relevant and probative information not obtainable through verbal testimony alone. Second, their emotional force is often inherent in the nature of the (relevant) facts depicted, not gratuitous, and thus so integral to the judgment task that to exclude the evidence would be to disappoint and frustrate jurors' expectations about what (persuasive) proof ought to look like (cf. *Old Chief v. United States* 1997). Third, the emotions these pictures provoke may be relevant to the legal issue at hand (e.g., during capital sentencing, where the heinousness of the crime as revealed by the method of causing death is an aggravating circumstance justifying a vote for the death penalty) or, even if not, may signal to jurors the true extent of a victim's suffering (e.g., the severely and permanently injured accident victim) and thus motivate them to give arguably just compensation. In short, as with most other emotion sources sought to be introduced during the evidentiary phase of trial, these pictures could be excluded, possibly reducing the role of emotions on juror decision making, but whether judges should do that is a very different matter.

Closing Arguments

Lawyers' arguments at the close of the case risk amplifying emotion effects on judgments in three ways. First, summations are not governed by the rules of evidence, and so lawyers are permitted a much wider range of reference than are testifying witnesses. They can tell stories, allude to the Bible or other sources of cultural knowledge, and even impute thoughts and words to the parties as long as no evidentiary claims are made for those imputations. This extends the possibilities for emotional influence, including from incidental sources (e.g., a juror's associations with a Bible passage the lawyer mentions). Second, any emotional effects produced in closing may be enhanced by a recency effect (e.g., Glanzer and Cunitz

1966): When jurors go to the jury room, those emotions will be more recent and thus, all things being equal, more salient to them and more likely to be drawn on when thinking through the case during deliberations. Third, the opposing attorney will not have the opportunity to respond to and thus perhaps attenuate any emotional effects produced during rebuttal (cf. Carney and Feigenson 2004). Whether judges can and should try to constrain emotional influences arising from closing arguments (assuming that closings are permitted at all) is subject to more or less the same considerations discussed above in connection with emotions prompted during opening statements: the desirability of allowing attorneys to pull the case together for the jurors and help them to understand it, and deference to the logic of the adversarial system, in which the correction of overreaching by one advocate is typically left to the adversary.

Instructions

Almost all of the methods for containing emotional influences discussed to this point have to do with reducing or eliminating sources of emotional "contamination." Instructions, whether given at the time evidence is admitted or excluded or at the end of trial, are different. Here the legal system purports to help jurors to correct for the unwanted influences. As already discussed, however, uncertainties about the magnitude of those influences and the inability to calibrate adjustments appropriately limit the corrective potential of instructions. Research specifically on the efficacy of instructions, moreover, indicates that they may not serve the goal of bias correction very well (see Wilson et al. 2002) and may even undermine it. First, as Supreme Court Justice Robert Jackson famously noted long ago (*Krulewitch v. United States* 1949), jurors have a difficult time following limiting instructions to use evidence for one purpose (say, a defendant prior conviction as proof of the defendant's character for untruthfulness as a witness) but not for another (as substantive proof that the defendant committed the crime charged). Second, jurors (and judges; see Landsman and Rakos 1994) have difficulty following curative instructions to disregard improperly admitted evidence (for reviews on both points, see Lieberman and Arndt 2000; Wistrich et al. 2005). Third, the instructions themselves may make matters worse by increasing jurors' reliance on the information sought to be excluded from their thinking (Edwards and Bryan 1997; Lieberman and Arndt 2000).

Yet (as also discussed above) the situation may not be hopeless. Judges who simply grant objections to evidence and instruct jurors to ignore stricken words or pictures may not accomplish the goal of preventing jurors from relying on the excluded information, and instructions that simply admonish jurors not to be influenced by their emotions may similarly fail. On the other hand, instructions that explain why the evidence, or emotional influences generally, are being excluded, taking account of jurors' likely preconceptions regarding that evidence and the role of their emotions in their decision making, may be likelier to succeed (see Diamond

and Casper 1992; Smith 1993; but cf. Pickel 1995). Admittedly, this sort of instruction cannot be given in connection with every pertinent evidentiary ruling in the heat of trial. Suitably general pre-instructions (see American Bar Association 2005), however, could be delivered at the start of trial to inoculate jurors against the temptation to use emotional information despite being instructed not to (perhaps because they are curious about why the information is being kept from them) or even in reactance to the instruction not to (Lieberman and Arndt 2000). The general instruction could then be repeated just before the jury retires to deliberate.

The proposed instruction might run as follows: "It would be natural for you to experience emotional responses to aspects of this case – to portions of testimony or other evidence about what happened, or to the parties themselves. Your sympathy for the victim [in a personal injury case], for instance, may incline you to do something to help him, such as finding the defendant liable and awarding damages. The law, however, requests that you put those emotions aside in considering the evidence and reaching your verdict. This is not meant to disparage your feelings; the law recognizes that you consult your feelings to make important decisions in your daily lives. The problem with using your emotions as you hear the case and try to reach your verdict is that emotions may lead you not to think carefully enough about the evidence; they may cause you to interpret the evidence in a biased fashion; and they may make you less receptive to alternative interpretations and arguments which your fellow jurors may offer during deliberations. So do your best to decide this case solely on the basis of non-emotional reasons."

Two differences between the proposed instruction and the current standard admonition not to be influenced by emotion are especially worth noting. The proposed instruction explains *why* the law tries to avoid emotional decision making, which respects jurors' intelligence and (ideally) would increase their motivation to comply with the law. And it acknowledges and expresses respect for jurors' natural thinking and judgment habits, reducing the risk that reactance will prevent them from following the instruction.[27]

Relatedly, other instructions (both at the outset and at the end of trial) that address the decision-making context – encouraging jurors to keep an open mind, to consider the evidence very carefully, to reflect on the seriousness of their task, and perhaps to adopt procedures during deliberation that will facilitate reasoned, "System 2" reflection on any emotion-driven "System 1" verdict preferences – may also reduce the impact of emotional thinking. Neither this recommendation nor the preceding one has yet been directly tested, however; research examining them would be very helpful.

[27]And in especially emotion-laden cases, instructions that advise jurors in some detail about their possible emotional responses and how to deal with them seem less likely to *increase* significantly the salience of those emotions and hence their role in judgment (cf. Edwards and Bryan 1997) because the emotions will be so salient anyway.

Deliberations

Correction for the unwanted effects of emotional influence, including promoting appropriate adjustments from the anchoring effect of the initial moral–emotional response, can continue in the jury room. Again, for the general reasons offered above as well as reasons specific to this stage of the trial, the task of debiasing legal judgments from emotional influence during deliberations is daunting and not likely to be more than partly successful. Jurors' understandings of the case are often pretty well entrenched by the time they begin deliberations; they have had the entire trial to integrate their emotional responses with perceptions and interpretations of the evidence, and their tendency toward cognitive coherence has further tightened the bonds they perceive among evidence, arguments, and preferred judgment. Moreover, the process of deliberation invites jurors to defend their views to fellow jurors and to persuade those who disagree to change their views; jurors engaged in either of these activities may be inclined to think more like "intuitive lawyers" than intuitive social scientists, their efforts at reasoned persuasion nothing more than advocacy for positions already reached on intuitive, emotion-driven grounds (Haidt and Bjorklund 2008). Bias entrenchment, not bias correction, is indicated in such motivated conditions. And there is always the possibility that deliberating jurors will introduce new sources of emotional influence that may exacerbate already existing emotion effects.

Still, there are several reasons to think that deliberations can reduce if not eliminate unwanted emotional influences on decision making. As Haidt and Bjorklund (2008) acknowledge, the airing of diverse viewpoints and arguments provides opportunities for reframing the moral–legal situation in ways that may generate new intuitions that compete with earlier ones. At a finer-grained level, the presentation and discussion of alternative interpretations of the facts should temper or remove the tendency of anger and certain other emotions to reduce the depth of information processing. Jurors disinclined by their emotions to think through the evidence more carefully may be inspired to do so by hearing others' contrasting interpretations. For similar reasons, alternative understandings of the evidence may provide a corrective to emotion-driven biases in the construal of ambiguous evidence (appraisal tendency), and lengthy discussions of the facts of the case in themselves ought to reduce the inclination to process information heuristically by resorting to one's transient emotional state as a guide to the decision (affect-as-information). Finally, encouraging jurors to talk through their reactions to the evidence, especially visual displays, may help bring to consciousness, and thus make more amenable to correction, emotional associations and biases that would otherwise remain implicit and unavailable for scrutiny (Feigenson and Spiesel 2009).

To achieve the maximum corrective effects from deliberation, jurors should be encouraged to adopt an *evidence-driven* style of deliberations, in which jurors freely review the evidence ostensibly without regard to their individual verdict preferences, rather than a *verdict-driven* one characterized by early and frequent public balloting, with evidence discussed mainly as it supports each juror's verdict preference (Hastie et al. 1983). Evidence-driven deliberations tend to last longer

(Hastie et al. 1983) and thus, all things being equal, should attenuate the impact of initial emotions on ultimate judgments. Evidence-driven deliberations also seem less likely than verdict-driven ones to exacerbate the effects of cognitive coherence and may even diminish those effects, increasing the opportunity for jurors to reexamine the conclusions to which their intuitive emotional responses may have led them. Relatedly, postponing polling should also make the *need for closure* (e.g., Kruglanski 1989) less salient and thus reduce the tendencies toward biased information searching and decreased depth of information processing associated with that need. Finally, the very experience of considering and debating competing interpretations of the facts and the law at length may give jurors the satisfying feeling of having behaved in accordance with legal norms as communicated in the judge's instructions (e.g., to consider the evidence carefully and keep an open mind), which can replace their emotional responses to the case itself as a source for "feeling right" about their decision (cf. Feigenson 2000). For all of these reasons, if the legal system aims to reduce emotional influences on judgment, instructing jurors to pursue evidence-driven deliberations is recommended.[28]

Conclusion

Psychological research on the role of decision makers' emotions in their judgments of legal responsibility and blame is still in its infancy. The following conclusions, therefore, must remain tentative until supported or refuted by further research:

1. Emotions and moods, from sources both incidental and integral to the case being judged, may influence legal judgments in several interrelated ways: by altering depth of information processing, by biasing judgments in the direction of the emotion's valence or appraisal structure, and/or by providing informational cues to the ultimate decision. However, multiple and sometimes conflicting emotional responses to different features of the case, feedback loops between emotional and non-emotional cognitions and judgments, and the extension of integral emotion sources over the course of the trial (from opening statements through the evidentiary phase to closing arguments and deliberations) all make the task of gauging the effects of particular emotions, from particular sources, on ultimate judgments highly, perhaps impossibly, complex.
2. Decision makers' emotions may improve or impair their legal judgment. Whether emotions do so in any particular case depends on the nature of the case, the decision makers, the emotions likely to be involved, and of course the criteria used to define the optimal judgment process and outcome.
3. The legal system's current methods for limiting emotional influences on judgment, although probably partly effective, are based on overly simplistic conceptions

[28]This would, however, be contrary to the recommendation of the American Bar Association (2005, p. 107) that "[t]he jurors alone should … determine how to conduct jury deliberations."

of the relationship between emotional and non-emotional cognition and of the nature of bias correction. More effective reduction of emotional influences may, if desired, be achieved through stricter admissibility rulings, a general instruction regarding emotion-based decision making that jurors are likelier to understand and want to follow, and the encouragement of evidence-driven deliberations in which intuitive emotional responses are likelier to be adjusted in light of non-emotional thinking.

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Chapter 4
Explorations in Juror Emotion and Juror Judgment

Norbert L. Kerr

Introduction

> "*Data! Data! Data!" he cried impatiently. "I can't make bricks without clay.*"
>
> Doyle (2003), p. 383, *The Adventure of the Copper Beeches*

> *It is a capital mistake to theorize before one has data.*
> *Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.*
>
> Doyle (2003), p. 189, *A Scandal in Bohemia*

The fictional sleuth, Sherlock Holmes, was acutely sensitive to the importance – even the primacy – of empirical evidence for developing workable theories. It is an insight which modern behavioral scientists might be well advised to recognize. Elsewhere (Kerr 1998), I reported some survey data that indicated that modern editors, reviewers and readers expect nearly any sound piece of behavioral science to begin with an explicit hypothesis, derived from a priori theory. I went on to suggest that this strong preference was based on both a healthy and unhealthy premise. The healthy premise is that cogent a priori theory can do much to justify, organize, and empower our observations – an axiom of the classic hypothetico-deductive model of science (e.g., Hempel 1966). The unhealthy premise is that this is always or invariably the case – that "…it is a capital mistake *not* to theorize, regardless of the knowledge, understanding, or even existence of the facts" (Kerr 1998, p. 201).[1] This tempts us to attempt to make theoretical bricks, even when we lack empirical clay.

N.L. Kerr (✉)
Michigan State University, East Lansing, MI, USA
e-mail: kerr@msu.edu

[1] I also suggested (and provided a bit of evidence) that this insistence that scientific reports always feature a priori hypotheses has even led to the widespread practice in scientific communication of presenting hypotheses that are actually post hoc as if they were a priori hypotheses, a practice I termed HARKing (for Hypothesizing After the Results are Known).

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The subject of this year's Nebraska Symposium, and this volume, is how emotions arise within and affect the behavior of actors in legal settings. My own particular interests in this relatively broad and new area of study (e.g., Wiener et al. 2006) are what determines the emotions experienced by jurors, and how those emotions might affect their judgments (e.g., their verdicts or their sentence recommendations in capital cases). Of course, scientific interest in emotions is hardly new; emotions have been the subject of inquiry since the beginnings of scientific psychology (e.g., James 1890; Cannon 1929). More recently, scholars in my own discipline, social psychology, have actively and productively been exploring the role that emotions or affect play in human social judgment and behavior (e.g., see Forgas 2006, this volume; Schwarz and Clore 2007; Zajonc 1998, for overviews). Much empirical clay has been collected and shaped into sturdy theoretical bricks. And much of this theory will undoubtedly apply to and inform the study of the role of emotions in the law.

Unfortunately, the empirical base of the literature on the study of emotions in the law is sparse, fragmented, and often only obliquely informative on the effects of emotions, per se – in short, we have rather little empirical clay with which to make theoretical bricks in this area. The objective of this chapter is to describe to the reader three bags of empirical clay that have been unearthed by my colleagues and myself. This puts me, I suppose, in the role of a scientific "hod carrier," which might well be viewed as a rather unskilled type of labor.

Such reflections prompt me to take a brief, biographical digression. Before I began graduate study in psychology, I was an undergraduate physics major. In physics, there is a well-accepted division of scientific labor. Some physicists are theorists. All their work is conceptual (usually mathematical). A blackboard may be all the equipment they need (besides a keen mind). Another, nearly non-overlapping set of physicists are experimentalists. They test the theorists' hypotheses, and provide observations which help guide new theory development. When I began my studies in psychology, I was a bit surprised to learn that such a strict division of labor is not maintained in the behavioral sciences. Indeed, every behavioral scientist worth his/her salt seemed to be expected to actively take on both roles. Certainly most of my new role models, the most influential contributors of social psychology (e.g., L. Festinger, H. Kelley, M. Sherif, S. Asch, R. Zajonc, …), had impressive credentials in both theory development and experimentation. Thus, it is with chagrin that I confess that I have no broad, new theoretical insights to offer on how emotions affect behavior in legal settings. But I do have a few interesting observations to share, which I hope will both provide tests of some of the promising existing theoretical ideas and help guide the development of new theory.

Emotionally vs. Factually Biasing Pretrial Publicity

Detection is, or ought to be, an exact science,
and should be treated in the same cold and unemotional manner.

Doyle (2003), p. 100, *The Sign of Four*

It may well be, as Sherlock Holmes suggests, that emotions cloud one's reason, but one potential virtue of emotion is that it can draw and focus one's attention. One possible illustration may be the occurrence of vivid, "flashbulb memories" of events that were emotionally significant (e.g., where one was when JFK was assassinated; Brown and Kulik 1977; but see Neisser 1982, for a differing view). A considerable amount of research suggests that emotionally laden information is advantaged in both encoding and recall (see Baumeister et al. 2007; and Burke et al. 1992, for reviews). Of course, sometimes this can create problems in legal contexts, as when one emotionally laden stimulus (e.g., a weapon) draws more attention than a less-emotional but more legally significant stimulus (the perpetrator's face or appearance; Loftus et al. 1987). Also in legal contexts, Bell and Loftus (1985) have argued that vivid testimony generally has more impact than more pallid testimony, an effect they partially attribute to the power of vivid testimony to alter the listener's (e.g., juror's) emotions. All this suggests the hypothesis that emotionally arousing evidence or other information is likely to be better remembered and more impactful on jurors' judgments than otherwise-comparable, unemotional information.

One type of "other information" that lends itself nicely to testing this hypothesis is pretrial publicity (PTP). A few years ago, some colleagues and I became interested in the possible effects of PTP on juror behavior. We began by reviewing the literature (Carroll et al. 1986) and documenting the unsurprising fact that certain types of PTP (e.g., reports of a confession or a prior record) could indeed be prejudicial. If, as this literature seemed to suggest, pretrial publicity was a likely source of bias in juror judgment, we wanted to explore just how effective the various remedies routinely used by the court were. These remedies include a change of venue, extensive *voir dire*, cautionary instructions from the judge, jury deliberation, or a continuance (i.e., delaying a trial until memories of the crime and its attendant publicity have faded). If, as argued above, emotionally tinged PTP really is better remembered and more impactful for jurors, then perhaps some of these remedies might work less well for such publicity.

Rita Simon (1966; also see Hoiberg and Stires 1973) drew a useful distinction between two types of PTP that could bias juror judgment. *Factually biasing PTP* contains information that is likely to bias jurors' interpretation or evaluation of the facts of the case. For example, publicity that reported a criminal defendant's prior conviction in an unrelated case might lead a juror to infer that the defendant was more likely to have committed the crime in the present case. Note that such publicity is not assumed to be "factual" in the sense that it is necessarily correct or valid. Nor is such publicity necessarily legally relevant or admissible; indeed, it is precisely when jurors are proscribed from considering such information that it can fairly be characterized as biasing. *Emotionally biasing PTP* contains information that serves to arouse jurors' passions without having any direct or indirect implications for a defendant's likely guilt. A graphic or lurid media description of a murder victim's injuries could be emotionally biasing in this sense. Another example might be the publicity surrounding the series of child murders occurring in Atlanta several years ago, which created a climate of fear and vengeance that may have contributed

to the eventual conviction of the person charged with these offenses ("Caught in the headlines" 1981). There is even some research suggesting that salient publicity surrounding one crime can influence the jurors in a wholly different trial (Greene 1990). Now, if as I noted above, emotionally charged information is harder to forget than comparable unemotional information, it follows directly that a continuance should be less effective in eliminating the effect of exposure to emotionally biasing publicity than for comparable factually biasing publicity.

Several criteria had to be met in developing stimulus materials appropriate to testing this hypothesis. We needed a stimulus trial that: (1) was as realistic as possible, (2) could fit into a relatively short experimental session, (3) did not (in the absence of either type of publicity) produce extremely high or low rates of conviction, and (4) lent itself to the creation of emotionally and factually biasing publicity. Eventually, we settled on a video-taped version of a robbery case previously produced by Reid Hastie. In it, a young black defendant was accused of the armed robbery of a grocery store. Three witnesses were called during the trial: two employees of the supermarket and the investigating police officer. The prosecution's case was built primarily on the eyewitness identification of the defendant by the supermarket employees. The defense case rested upon demonstrating the unreliability of the eyewitness testimony and upon the unprofessional and sloppy nature of the police investigation. The trial was filmed in a courtroom with experienced legal personnel (judge and attorneys) and professional actors playing the various roles. It was quite realistic, including all standard trial elements. On the other hand, it was too long and in our population of potential mock jurors, it produced an unacceptably high rate of acquittals (i.e., it was too close to being an "open-and-shut" case for the defense).

It might be instructive to take a brief aside to touch on this methodological problem, because in our own early research on jury decision making, we failed to appreciate its importance. In my first jury simulation study (Davis et al. 1975) we wanted to experimentally compare the process and product of jury decision making in 6- vs. 12-person juries deliberating under both unanimous and non-unanimous decision rules. We produced our own (looking back now, rather unrealistic) audio trial summary, which produced a pre-deliberation conviction rate of only 22%. We subsequently found and reported that neither jury size nor decision rule significantly affected mock jury verdicts with this case. But this was less because these variables are irrelevant to jury decision making (much subsequent work showed that they were quite relevant; cf. Kerr and MacCoun 1985; Saks and Marti 1997), but because with such an extremely pro-defendant stimulus trial, essentially no juries began with a sufficiently large pro-conviction faction to make that verdict viable. Thus, even when individual juror sentiment is not clearly "on the ceiling" or "on the floor", the corresponding jury sentiment is likely to be (cf. Kerr et al. 1996; Tindale et al. 1996). Fortunately, by identifying a social decision scheme (cf. Davis 1973; Stasser 1999; Stasser et al. 1989) that accurately summarized the jury decision-making process of all our mock juries, we were also able to theoretically explore what effect jury size and decision rule should have in trials that were not so "open and shut," and were able to see (and later show, e.g., Kerr et al. 1976) that

our early null results were misleading (for a similar object lesson, also see Kerr et al. 1999). The moral of that early blunder has stuck with me – when looking for interesting juror/jury phenomena, always be sure to begin with a stimulus trial that is "close" (i.e., produces a conviction rate near 50%). Actually, since the reasonable doubt standard builds in a pro-defendant bias (MacCoun and Kerr 1988), an optimally "close" case when one is studying juries tends to be one that is slightly pro-prosecution (e.g., producing around 60% juror convictions). By juggling with the facts of Hastie's original stimulus trial, we were eventually able to get the conviction base rate at an acceptably moderate level (~40–50%). And, by substituting summaries of witnesses' testimony, we were able to get the trial down to a length (~50 min) that would fit within an experimental session, but without altering jurors' essential reactions (Kramer and Kerr 1989).

This trial summary lent itself admirably to a manipulation of factually biasing publicity. We simply produced a series of newspaper articles and television news clips that reported: (1) that the defendant had an extensive, prior criminal record that included armed robbery convictions, and (2) that incriminating physical evidence (e.g., a bag like one used in the store robbery) had been found in the defendant's girlfriend's apartment. However, neither of these tidbits of information was ever presented in the trial itself; so while they were potentially incriminating, they were never admitted as evidence. The news reports also indicated that police search procedures had been faulty and that consequently, the physical evidence found by the police had been ruled inadmissible. The defendant did not take the stand in his own defense during the trial, and hence, his prior criminal record was never revealed in court.

The manipulation of emotionally biasing publicity was not nearly so straightforward. No one was injured in the robbery, so the most obvious means of inducing strong emotional responses among the jurors (viz., by news reports that featured graphic or gruesome depictions of those injuries) was not viable. We struck instead on the notion of having the defendant implicated in a wholly different crime – a hit-and-run traffic accident in which a young girl, Molly Malone, was injured. Sadly, such incidents are all too commonplace in the media these days, and we feared that jurors would not have a particularly strong emotional reaction to one more report of such a crime involving an anonymous, faceless victim. It was important that Molly was not just another crime statistic, but someone the jurors "knew" and cared about. So the emotionally biasing publicity began with a television feature story that introduced Molly as "Tuesday's Child," a child in need of a Big Brother or Sister. The piece included scenes of Molly in the playground on her bicycle, an interview with her holding her favorite stuffed animal, and an interview with her single mother discussing Molly's special health and financial needs.

Separate, later news reports then reported that Molly had been struck and seriously injured in a hit-and-run accident that occurred a few hours after the robbery. The license plate and description of the hit-and-run vehicle matched the license plate and description of the robbery getaway car. To help avoid "blaming the victim" (e.g., Lerner and Miller 1978) and hence, some lessening of the emotional impact of this publicity, eyewitnesses at the accident scene insisted that the car had

run a red light and had not tried to avoid hitting Molly, who was walking her bike in the crosswalk. Further, the description of the passenger in the hit-and-run vehicle matched the description of the robber. One image in a newspaper report showed a passerby leaning over the unconscious child at the side of the road. Another image in the television news was of the same bicycle that Molly had ridden in the earlier piece, now mangled in the street's gutter with her stuffed animal lying beside it. The defendant was described in two separate reports as a prime suspect in the hit-and-run. The final television report in the emotionally biasing condition was a brief hospital interview with the grieving mother, shortly after she learned that her child had died.

As with the factual PTP manipulation, it was important that this information about the hit-and-run be logically irrelevant to the defendant's possible guilt of the crime with which he was charged, the robbery. Otherwise, this would not just be a way of manipulating potential jurors' emotions, but possibly a source of relevant robbery trial evidence. Although the publicized information surrounding the hit-and-run incident did suggest that the actual robber may have been a passenger in the car at the time of the hit-and-run, none of this information bore in any way on the personal identity of the robber. Moreover, there was no mention during the robbery trial of the hit-and-run incident or anything involving the child. In summary, the emotionally biasing publicity was designed to arouse strong emotions (of grief, of anger) in the viewers without providing any direct or indirect evidence that the particular defendant on trial was guilty of the robbery offense with which he was charged.

Of course, in testing our hypothesis about the relative effectiveness of a continuance for factually vs. emotionally biasing PTP, it was also crucial to first establish that the factually and emotionally biasing publicity being compared were equally biasing absent a continuance. Otherwise, one would not know whether it was the strength of the biasing information, per se, rather than its level of emotionality that really mattered. Extensive pilot testing was done to insure that the final versions of these two treatments had significant and roughly comparable immediate effects on juror verdicts (that were prejudicial to the defendant; cf. Kramer and Kerr 1989).

In the main experiment (Kramer et al. 1990), availability of the two types of biasing publicity was manipulated independently in a 2×2 design. The control, no-factual/no-emotional version contained only brief reports of the robbery and the defendant's arrest for it. The bulk of the participants were adults recruited from the jury pool of a local circuit court in Lansing, Michigan, and were paid for their participation.[2] About half of the volunteer participants (those in the Delay condition) were shown one of the four publicity videotapes a little under 2 weeks (mean delay = 12.0 days) prior to seeing the trial tape. The rationale for providing these materials (to both to the Delay and No-delay jurors) was that it was important that their experience parallel, as much as possible, the experience of the jurors who

[2] Although some students, compensated with class credit, were also recruited to fill out experimental sessions, we found no evidence of systematic differences between student and nonstudent participants (see Bornstein 1999, for a fuller discussion of this issue).

decided the actual case. To help accomplish this, participants were told that they would see the material that was widely available to the public prior to the actual trial. The remaining participants (No-delay condition) saw one of the four versions at the very beginning of their 2-hour experimental session. In that session all participants (1) participated in a simulated *voir dire* procedure that included both juror background questionnaires and (for a subset) a series of generic questions for a high-publicity trial,[3] (2) saw the videotaped trial summary (that also manipulated the presence of a pre- and post-trial judicial admonition to ignore any and all information obtained outside of court, including information from press or media sources), (3) rendered individual pre-deliberation verdict preferences and a few other judgments (e.g., probability of guilt ratings), (4) (except for those who had expressed a clear PTP-related bias) were randomly assigned to non-unanimous 6-person mock juries, (5) given up to an hour to deliberate and reach a unanimous verdict, and (6) completed an extensive post-deliberation questionnaire.

In the juror background questionnaire completed after seeing the PTP but before seeing the trial, mock jurors indicated how they had felt after seeing the PTP. For those in the No-delay condition, this was immediately after seeing the PTP tape. For those in the Delay condition, this was, on average, 12 days after having seen the PTP tape. Three results are of particular importance given our current focus: (1) mock jurors exposed to the emotionally-biasing PTP reported significantly ($p<0.001$) stronger emotional responses (on a composite index [Cronbach's $\alpha=0.82$] based on ratings of how sad, angry, shocked, and upset they felt), and (2) exposure to the factually-biasing PTP had no effect on mock jurors' emotional responses. Therefore, in addition to satisfying several other necessary conditions described earlier, we had, through careful pretesting, created emotionally and factually biasing publicity that was equally biasing in terms of their immediate effects on jurors' verdicts, but that clearly differed in emotional impact. Moreover, (3) the emotional responses induced by the emotionally biasing PTP were not moderated by the delay factor; the passage of nearly 2 weeks did not lessen the recalled emotional impact of this publicity.

For our purposes, jury verdicts could be scaled on a simple 3-point scale: 1 = not guilty, 2 = hung, and 3 = guilty. Analyses of this scale resulted in support for our continuance hypothesis. Specifically, the Delay × Factual Bias interaction was significant ($p<0.025$); as shown in Fig. 4.1a, the biasing effect of the factual publicity was significant ($p<0.05$) in the No-delay condition, but was not statistically detectable ($p>0.10$) in the Delay condition. By contrast, the biasing effect of the emotional publicity was clear and unaffected by the delay ($p<0.01$; see Fig. 4.1b). So even though the two kinds of prejudicial PTP were equally biasing in their immediate impact, only the emotional publicity's effect survived a 12-day delay between exposure and trial.

[3] Their responses were later analyzed and it was found that juror selection by experienced judges or attorneys did not attenuate the biasing effect of exposure to either factual or emotional publicity (Kerr et al. 1991). Also, there was no association found between jurors' professions of lack of bias, and their actual lack of bias (also see Sue et al. 1975).

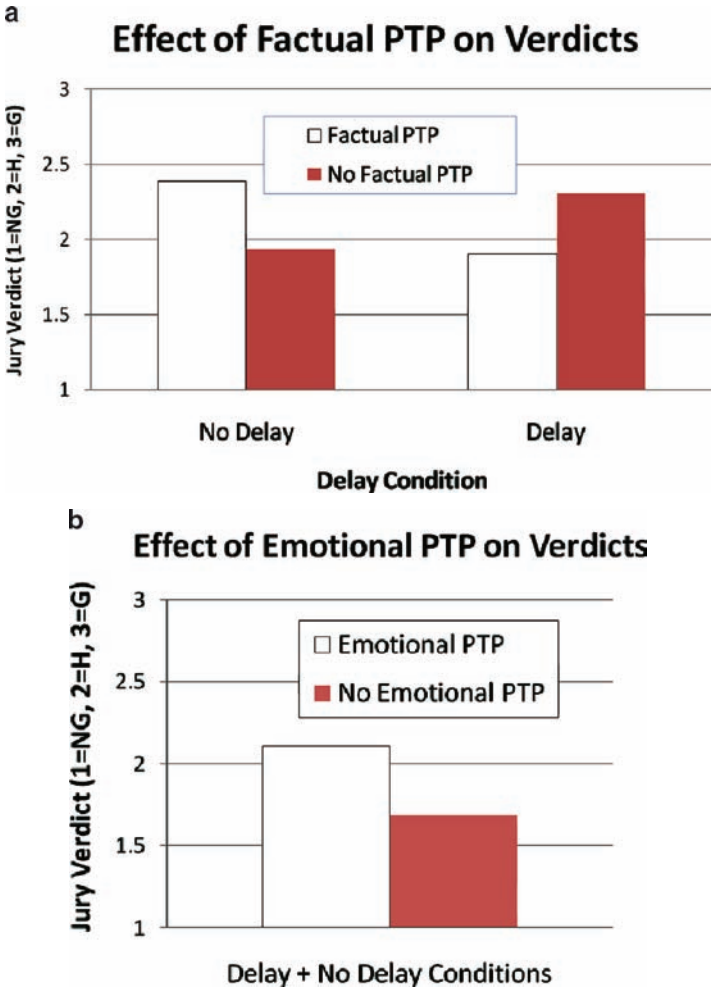

Fig. 4.1 Effects of delay and emotionally and factually biasing publicity on mock jury verdicts (Kramer et al. 1990)

Other evidence implicated memory differences in these results. In the final, post-deliberation questionnaire, jurors were asked to take a multiple choice test of their memory for six factual and two emotional publicity facts. In part, these data helped establish the validity of the manipulations; there were highly significant ($p < 0.001$) associations between exposure to each type of publicity and memory for the corresponding items. But of much more relevance to our current discussion, there was also a clear tendency for high-fact subjects to make more mistakes in recall in the delay condition (the Delay × Factual PTP association was significant, $p < 0.01$, for five of six items). So, for example, whereas only 16.3% of the high-fact/

no-delay subjects forgot the prior robbery convictions that had been reported to them, 54.3% forgot this information in the high-fact/delay condition. The overall level of accuracy of participants exposed to the factually biasing publicity is plotted in Fig. 4.2. Thus, there was evidence that memory for incriminating factual pretrial publicity was considerably impaired by only a few days delay between exposure and trial. By contrast, the deterioration of memory for the emotionally biasing information, while still significant ($p < 0.01$), was far less dramatic, as one can see in Fig. 4.2. So, not only did the emotional impact of the emotional PTP persist in time, for the most part, so did mock jurors' memory of this publicity's content.[4]

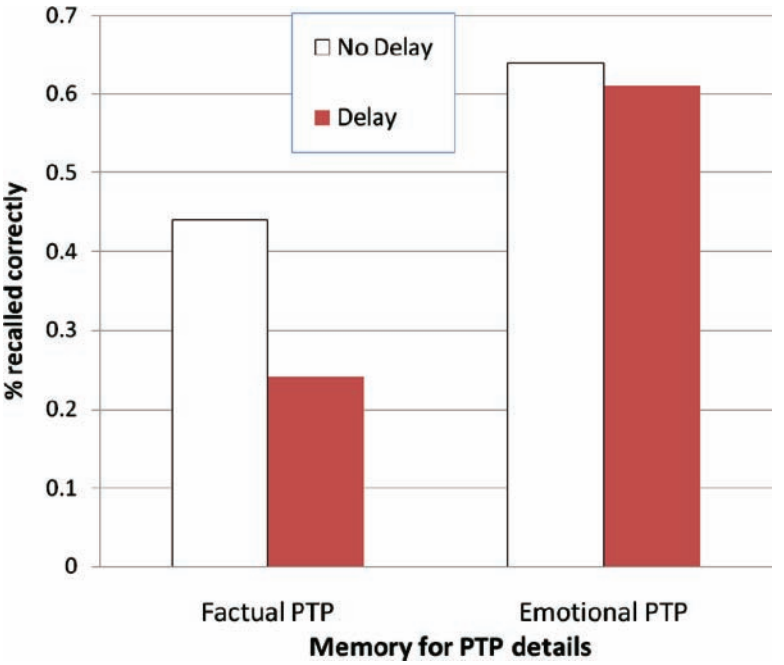

Fig. 4.2 Effects of delay on memory for details of factually and emotionally biasing pretrial publicity

[4] It might also be noted, for the interested reader, that none of the other potential remedies considered in our research showed any benefit in reducing the biasing effect of either factually or emotionally biasing publicity. As has been found in many other studies (cf. Lieberman and Sales 1997), judicial instructions admonishing jurors to ignore certain information (here, pretrial publicity) had no effect whatsoever. The verdict preferences of jurors who passed the causal and peremptory challenges of a sample of experienced judges and attorneys were no more or less biased than those in the unscreened sample (Kerr et al. 1991). And instead of jury deliberation leading jurors to rely less on extra-legal, biasing information (here, pretrial publicity), as some have suggested (e.g., Kaplan and Miller 1978; Kerwin and Shaffer 1994), the effects of both kinds of pretrial publicity were stronger among deliberating juries than individual jurors.

In summary, our research on pretrial publicity showed that biasing pretrial publicity whose content was relatively unemotional was, with the passage of just a few days time, quickly forgotten and lost its potential to bias jury verdicts. By contrast, pretrial publicity whose immediate impact was comparable but whose content was highly emotionally arousing was equally biasing, equally arousing, and (nearly) equally well remembered after a few days time as it was upon initial exposure. Of course, our research should not be assumed to generalize too widely. It seems likely that with a sufficiently long delay, both factually and emotionally biasing publicity could lose their impact. And it is possible that under other conditions (e.g., different respondents, different instructions to jurors), our results might not generalize. But these results do bolster the general thesis that, all else being equal, information which is emotionally arousing may have stronger and more long-lasting effects on jurors' judgments than information that fails to affect juror emotion.

Emotional Bias, Nullification Instructions, and the Chaos Theory

> *The emotional qualities are antagonistic to clear reasoning*
>
> Doyle (2003), p. 108, *The Sign of Four*

Holmes is hardly alone in his concern that strong emotions may interfere with our ability to reason in a clear and accurate way. Antipathy between feeling and thinking has long been a theme in literature, philosophy, and even the behavioral sciences (e.g., James 1890; Forgas 2008). One provocative suggestion that has now received fairly substantial support is the proposition that we use our emotional states as a sign of how problematic or dangerous the current situation we face is. This proposition has been well summarized by Schwarz (2002):

> …when things go smoothly and we face no hurdles in the pursuit of our goals, we are likely to rely on our pre-existing knowledge structures and routines, which have served us well in the past. Once things go wrong, however, we abandon this reliance on our usual routines and focus on the specifics at hand to determine what went wrong and what can be done about it. Hence, our actions, and the context in which we pursue them, are represented at a greater level of detail when things go wrong than when things go well. …we assume that feelings, bodily sensations, or environmental cues provide information about the benign or problematic nature of our current situation. …these conjectures suggest that our cognitive processes are tuned to meet the situational requirements signaled by our feelings (Schwarz 2002).

To oversimplify, this "cognitive tuning" model suggests that when one is in a positive affective state (e.g., happy, contented, tranquil), one infers that one's environment is more likely to be benign, and hence, we are unmotivated to process information thoroughly and carefully. In line with several dual-process models (e.g., see Chaiken and Trope 1999), when we lack the motivation to process information thoroughly and carefully, we are more likely to rely on various "short-cuts"

(i.e., judgmental and decisional heuristics) to guide our judgment and behavior. But when one is in certain negative affective states (e.g., fearful, surprised, nervous),[5] one is more likely to infer that one's situation is not benign, to be vigilant for useful information, and to process it carefully and thoroughly.

There is now considerable empirical research that is consistent with this theoretical model (e.g., see Schwarz 2002, for a review). I worked on one study (Hertel et al. 2000) that is illustrative. It examined the effect of different moods on cooperation in a mixed-motive setting. The setting examined was a "chicken-dilemma," named after a contest of bravery (and folly) popular among certain men (see Entry #7 of Kelley et al. 2003) – e.g., two contestants drive toward each other at high speed to see which one "chickens out" and swerves aside first. The generic feature of such a dilemma that interests us here is that it is one in which rational action prescribes doing the opposite of what one's opponent does – if the other is going to swerve, one gains the prize ("bragging rights") by not swerving, but if the other refuses to swerve, one gains the better outcome by swerving (assuming that life is sweeter than death with such dubious honor). This stands in contrast to the prescription of a very familiar decision heuristic – "when in doubt, just do what others do." We had our experimental participants play a much less violent, laboratory version of a chicken game, a four-person taxi cooperative in which one had to decide whether to put little or much of one's working time into the cooperative or into independent driving. The contingencies were so arranged that one earned more by doing the opposite of what the others in the cooperative did. That is, if the others put lots of time into driving the cooperative's vehicle, one made more money by driving independently. But because there was a minimum level of cooperative driving required to retain the taxi license and all earnings, if the others put little time into the cooperative venture, it was more profitable for one herself to put more time in (to insure that the license and earnings would not be lost). But before making their choices in this game, we first manipulated participants' transient mood – participants were put either in a positive mood (happy in Experiment 1; secure in Experiment 2) or a negative mood (unhappy in Experiment 1; insecure in Experiment 2) and then given manipulated false feedback about the likely behavior of the other drivers. As the "cognitive tuning" model predicted, when participants were in a negative mood, they acted deliberately (more slowly) and rationally (they tended to do the opposite of what they thought others were likely to do), but when they were in a more positive mood, they acted more impulsively (more quickly) and heuristically (simply imitating what they thought others were likely to do).

There is also some interesting research applying these ideas to juror judgment. For example, Bodenhausen et al. (1994; Exp. 1) found that inducing anger led mock jurors to be more affected by racial stereotypes (which can function much as judgmental heuristics, cf. Macrae et al. 1994) than control jurors in a neutral mood. Interestingly, sadness did not have such an effect.[6]

[5] There is some indication that certain negative moods and emotions (e.g., sadness) might not have such effects, however (e.g., see Tiedens and Linton 2001).

[6] See Footnote 5, *Supra*.

Another rather different way in which juror emotion or mood might alter juror thinking and behavior is via *mood maintenance* processes (e.g., Knapp and Clark 1991; Erber et al. 1996), whereby jurors in a positive mood act so as to maintain that positive mood, and jurors in a negative mood act to improve their mood. Unfortunately, unless one specifies the affective consequences of alternative juror actions explicitly and precisely, the predictions this approach makes for juror judgment are not always clear. In any case, I have not been able to find juror or jury research applying such models. Another potentially relevant principle is *mood congruence* (e.g., Blaney 1986), which holds, for example, that we are more likely to retrieve memories that are affectively congruent with our current mood (e.g., we are more likely to recall unhappy events when we are in an unhappy mood). Forgas' *Affect Infusion Model* (AIM; e.g., Forgas 1995) incorporates such processes.

Yet another way in which juror emotion can affect juror thinking and judgment is when jurors treat their current affective state as information, to be interpreted and integrated with other available information (Schwarz and Clore 1996). A well-known illustration of such "mood as information" processing was provided in a classic study by Schwarz and Clore (1983). They found that people who were put into a good (or poor) mood by the day's weather reported more (or less) satisfaction with their life as a whole; they confused one emotional response (to the weather) with another (an evaluation of their life as a whole). If, however, the respondents' attention was first directed to the fact that bad weather was depressing their current transitory mood, they did not confuse their temporary bad mood with low life satisfaction. Interestingly, drawing participants' attention to good weather did not have the same effect; consistent with their "cognitive tuning" model, Schwarz and Clore speculated that we are more motivated to search for alternative explanations for negative emotional states than for positive ones. The key insight of this work for our current discussion is that people sometimes can misattribute the source of their current emotional states, with potentially important consequences for other judgments – life satisfaction in Schwarz and Clore's study, jury verdicts in our own research.

This can, I think, be nicely illustrated in our own most recent research on jury nullification. It might be helpful first to put this work in the context of case law and prior research.

Jury Nullification

Juries have the implicit power to acquit defendants despite evidence and judicial instructions to the contrary. The jury's right to decide a criminal case by its own lights without fear of reprisals has been a hallmark of Anglo-American jurisprudence. Since juries do not have to explain or justify their verdicts – including any apparent inconsistency with the trial evidence or applicable law – and since an acquittal is not subject to appeal, juries may choose to acquit a legally guilty defendant without fear of reprisal. Partly as a response to a number of high profile criminal

trials (e.g., the O. J. Simpson case; the initial trial of the police charged with beating Rodney King), this jury nullification power has been the subject of a resurgence of scholarly and popular interest in recent years (e.g., Brown 1997: Green 1985; Leipold 1996; King 1998; Marder 1999; Pepper 2000).

There are many reasons why a jury might choose to acquit a defendant who, under a strict application of the relevant law, is evidently guilty (cf. Horowitz et al. 2001; Kerr et al. 2008):

1. The jury may believe that the defendant's illegal behavior was justifiable. For example, contrary to the law, a jury might decide that a husband who kills his adulterous wife *in flagrante delicto* should not be convicted of murder, even if all the necessary elements for a murder charge have been proven. A similar example would be the jury that believes that an abused wife charged with the murder of her spouse was justified in the killing, and hence, should not be convicted.
2. The jury may believe that the law itself should be rejected. Perhaps the best known example is the unwillingness of Northern U.S. juries to convict defendants charged under the Fugitive Slave Act of 1850 with helping slaves escape their owners. Such juries may not only have seen the defendants' specific actions as justified, but the law that prohibited those actions as immoral.
3. The jury may believe that mercy was appropriate for a technically guilty defendant. For example, a drunk driver charged with involuntary manslaughter might be acquitted if the victim of the offense was the driver's own child; mercy might be seen as appropriate for a defendant who had "already suffered enough."
4. The jury may believe that a strict application of a law would result in punishment that is disproportionate to the crime. Criminal juries usually have a rather narrow responsibility – deciding whether a defendant violated the law. With but only a few exceptions (e.g., capital punishment cases), juries have no discretion about the penalty the defendant receives if convicted of a particular offense. They may, nonetheless, know something about what penalties are possible or likely for a conviction, and may further believe that the likely penalty is excessive given the facts of the case. In such cases, nullification may occur. For example, several historians (e. g., Radzinowicz 1948; Tobias 1967) have suggested that the harsh penal codes of eighteenth- and nineteenth-century England (over 200 offenses that could result in a sentence of death at the turn of the century) were mitigated in part by the refusal of many juries to convict of a capital offense or by convicting of lesser, noncapital offenses. Elsewhere, severe penalties for minor drug offenses have been alleged to reduce conviction rates (e.g., Galliher et al. 1974), as have "three strikes" legislation mandating severe penalties for a third felony conviction (regardless of the seriousness of the third felony or the defendant's total record; e.g., Walsh 2007). There is also evidence (Kerr 1978) that this may be accomplished, at least in part, by jurors relaxing their reasonable doubt thresholds when potential penalties are extremely severe.
5. The jury may believe that, regardless of the judgment of the court, a defendant acted under compulsion or diminished capacity. A well documented example is

the televised deliberation of the case of Leroy Reed (Frontline… 1986), who was acquitted of a charge of unlawful possession of a firearm. Although the jurors conceded that Reed had, in fact, violated the law, they also felt that his prosecution was unjustified, given his level of mental retardation.

6. The jury may believe that the defendant's actions were the result of admirable motives. For example, even though Dr. Jack Kevorkian did not deny aiding terminally ill patients to end their lives, in his first two trials juries declined to convict him of violating Michigan's assisted suicide ban. These acquittals have been attributed by some to the juries' sympathy for the victims' plight and Kevorkian's apparent motive (e.g., to relieve the patient's pain; e.g., Abramson 2000).

All of the preceding cases involve leniency stemming from a belief that the strict application of the law would result in an injustice. However, juries can functionally nullify the law for quite other reasons, as well. For example, strong evidence of guilt may be ignored because of sympathy for the defendant or animus toward the crime victim. Some acquittals of White defendants charged with killing Blacks in the American south have been attributed to such motives (e.g., Nossiter 2002). Jurors may also use acquittals as ways of "sending a message" – e.g., to protest some local or more general grievance. For example, some (e.g., Noble 1995) have suggested that the acquittal in the original O. J. Simpson trial was more a protest against alleged systemic racism in the Los Angeles police department than a verdict based on the evidence. In one infamous piece, Butler (1995) has even urged African-American jurors to acquit African-American defendants routinely to redress past or present discrimination and racism. And, it must be noted, interpreted broadly, jury nullification may result in legally-unjustified convictions as well as acquittals. For example, jurors' animus toward a defendant or sympathy for a victim could lead to a conviction, even when the evidence against a defendant is insufficient to meet the burden of proof.

The legal debate surrounding jury nullification has been spirited. A cascading series of judicial decisions, beginning before the Civil War and culminating just prior to the twentieth century, effectively ended the jury's right (although not its implicit power) to nullify the law (*Sparf and Hansen v. United States* 1895; *United States v. Battiste* 1835). Most subsequent case law condemns nullification as lawless and arbitrary (e.g., *Strickland v. Washington* 1984). Indeed, the 2nd Circuit Court of Appeals held that nullification is a violation of a juror's oath to apply the law as instructed by the court (*U.S. v. Thomas* 1997). The California Supreme Court ruled that jurors must follow the law – not their consciences – even when they believe the law would produce an unjust result. "A nullifying jury is essentially a lawless jury", was the theme undergirding the California Court decision in *People v. Williams* (2001). Although nearly all concede that juries have the power to nullify without fear of sanction, nullification critics deny that juries have an affirmative right to nullify (e.g., Schopp 1996; Scott 1989; St. John 1997). While the judiciary does not sanction the nullification power of the jury, some jurists, although unwilling to directly inform jurors of their nullification powers, would tacitly recognize

the jury's right to nullify by allowing defendants to testify about moral values and intent (Dann 1996). Others, particularly legal academics, have argued that juries not only do have such a right, but under certain circumstances, the moral responsibility of exercising that right (Amar 1998; Butler 1995; Magliocca 1998; Marder 1999; Scheflin and Van Dyke 1991), and should be so instructed.

Nullification Instructions and the "Chaos" Theory

Except in a few jurisdictions, standard jury instructions in U.S. courts currently tell jurors that it is their duty to follow the law as it is explained to them, and that failing to do so would be a violation of their oath as jurors and of the law. Although there are effectively no means of sanctioning a nullifying jury, such instructions often hint darkly to the contrary. Thus, standard instructions not only fail to mention the jury's power to nullify, but bluntly assert that jurors have an obligation not to nullify, regardless of any perceived injustice that might result from the strict enforcement of the law. Requests by trial attorneys to the judge to instruct jurors that they can consider their consciences and their sense of justice when reaching their verdict will nearly always come to grief on the rocks of *United States v. Dougherty* (1972).

In *Dougherty*, the 7th Circuit Court of Appeals was asked to consider the appeal of nine Catholic clergy. They had been convicted for breaking into and ransacking the offices of Dow Chemical Corporation as an act of protest of Dow's manufacture of napalm, then widely used in the Vietnam War. The defense had requested that the jury be instructed that it could return a verdict counter to the law and evidence if they felt that the legally-prescribed verdict would be unfair or unjust. The trial judge denied this request. The appellate court, by a 2-1 majority, ruled that the judge had acted properly. Writing for the majority, Judge Leventhal conceded that there were instances in which jury nullification was justified: "…the pages of history shine on instances of the jury's exercise of its prerogative to disregard uncontradicted evidence and instructions of the judge" (p. 1130). But, he maintained that informing jurors that they had the power to nullify would place undue demands on jurors: "to compel a juror …to assume the burdens of mini-legislator or judge, as is implicit in the doctrine of nullification, is to put untoward strains on the jury system" (p. 1136), and "To tell [a juror] expressly of a nullification prerogative…is to inform him, in effect, that it is he who fashions the rule that condemns. This is an overwhelming responsibility, an extreme burden for the jurors' psyche" (p. 1136). But there was more than benign concern for jurors underlying the ruling. The majority also was concerned that informing jurors of this power would inevitably result in its abuse. Citing *U.S. v. Moylan* (1969), they agreed that "…to encourage individuals to make their own determinations as to which laws they will obey and which they will permit themselves as a matter of conscience to disobey is to invite chaos… Toleration of such conduct would…inevitably [be] anarchic." Functionally, the majority ruled that jurors should and do have the power to nullify, but they cannot be trusted to be told that they have that power, lest they use it irresponsibly.

Judge David Bazelon derided this "chaos theory" in his minority opinion. He argued that there is no reason "…to assume that jurors will make rampantly abusive use of their power. Trust in the jury is, after all, one of the cornerstones of our entire criminal jurisprudence, and if that trust is without foundation, we must re-examine a great deal more than just the nullification doctrine" (p. 1116). Bazelon maintained that the issue was not one of anarchy but of candor – jurors should be told the truth, that they have the power to nullify the law. But they should also be cautioned to use that power carefully, sparingly, and only in the service of those deserving mercy.

One implication of the "chaos" theory is that jurors' personal biases would be unleashed if jurors were informed that they had the discretion to nullify the law. Some mock jury studies (Horowitz 1985, 1988; Pfeifer et al. 1996) suggest that juries in receipt of standard judicial instructions are more focused on the evidence and the judge's presentation of the relevant law than those jurors in receipt of instructions that explicitly permit nullification, who tend to concentrate relatively more on non-evidentiary matters. But this only shows that when jurors are allowed to go beyond the law, they do so. Hill and Pfeifer (1992) concluded that nullification instructions exacerbated the effect of a defendant's race in a rape case. Pfeifer et al. (1996) likewise concluded that jurors were more influenced by the means by which an act of euthanasia was committed after receiving nullification instructions. However, in neither study was the crucial interaction effect (viz. the bias x instruction interaction) statistically significant.

In their first three experiments, Niedermeier et al. (1999) used a case that clearly tempted jurors to nullify. A physician was charged with willful neglect for transfusing a patient with unscreened blood; the patient's subsequent infection with the HIV virus and death from AIDS was attributed to this act. However, the physician only transfused the patient after concluding that it was medically necessary, and only used the unscreened blood because no prescreened blood was available (in the aftermath of a tornado that caused many injuries, depleting the supply of screened blood, and that prevented medical supplies from reaching the doctor's clinic). Unsurprisingly, in all these experiments, mock jurors who received nullification instructions were more likely to acquit the physician than those who received standard instructions. Niedermeier et al. also varied several extralegal biasing factors – viz., the sex of the physician, the rank of the physician, the physician's expression of remorse, and the severity of the prescribed penalty. In every case, the extralegal information biased juror verdicts (e.g., jurors saw the female physician as more guilty than the male physician). However, in nearly every case, the receipt of nullification instructions did not moderate these biases. The one exception was for defendant status – the tendency to blame a lower status defendant (an intern) more than a higher status defendant (head of the hospital) was relatively stronger among jurors who had received nullification instructions. However, this interaction effect was significant only for individual jurors and not among deliberating juries. In a fourth experiment, Niedermeier et al. used a crime that did not raise any issues concerning the fairness of the law – a simple case of assault during a bar fight. The ethnicity of the defendant biased juror judgments (i.e., a Hispanic defendant was rated as more guilty than an Anglo defendant), but

the receipt of nullification instructions neither affected guilt ratings nor moderated the biasing effect of ethnicity.

In summary, practically none of the research that was done in the quarter century following the *Dougherty* ruling supported its jaundiced view of jurors' reactions to nullification instructions. When the facts of a case raised legitimate issues about the fairness of the strict application of the law, jurors who were told they have the discretion to nullify were more likely to do so. But such instructions did not appear generally to produce "chaos" in jury decision making; that is, it did not exacerbate the effects of juror prejudices, sympathies, or biases.

Nullification Instructions and Emotional Bias

Earlier I distinguished factual from emotional biases. In the *Dougherty* case, the trial and appellate judges were most concerned with emotional biases – the strong emotions aroused by the Vietnam War and the opposition to it. They were concerned that the trial jurors would have taken a nullification instruction as a license to decide the case not on the facts and the law, but rather on their sympathies (pro or con) for the defendants and/or their act of protest. While it is true, as reviewed above, that there was very little supporting empirical evidence for the chaos theory, my colleagues and I (Horowitz et al. 2006) were not convinced that this evidence was really conclusive. The problem was that most or all of the biases that had been examined to that point might not have been emotional biases – the focal concern of the *Dougherty* case – but rather, factual biases. For example, the Hispanic ethnicity of the defendant in Niedermeier et al. (1999; Exp. 4) may not have triggered any particular animus toward the defendant (an emotional bias), but may instead have altered jurors' interpretation or evaluation of the facts of the case (a factual bias; e.g., a stereotype of the "hot blooded" Latino may have made the prosecution argument – that the defendant assaulted the victim over the latter's attention to the former's female companion – better fit the facts of the case). Similarly, the other biasing factors examined in past research (e.g., defendant race, gender, remorse) may not have triggered emotional but factual biases.

This distinction struck us as important because there seemed to be many more opportunities for emotional reactions to serve as information (and misinformation) when emotional biases (vs. factual biases) are combined with conflicts over the fairness of the law. Trying to confront and redress a perceived injustice can be very emotionally arousing (e.g., Haidt 2001; Mikula et al. 1998). Typical nullification instructions give jurors license to consider their feelings in reaching a verdict. For example, consider Van Dyke's (1970) recommended nullification instructions:

> While you must give respectful attention to the laws about which you have just been instructed, you have the final authority to decide whether or not to apply a given law to the acts of the defendant on trial. As jurors you represent the conscience of the community and **it is appropriate to bring into your deliberation the feelings of the community and your own feelings based on your conscience**. In summary, you must respect the law, that

> is clear. However, regardless of your respect for the law nothing should stop you from acquitting the defendant **if you feel that the law**, as applied to the fact situation in this case, would lead to an injustice. (Van Dyke 1970; emphases added)

But, emotional biases, by definition, also alter one's emotions. What if these two emotions become confused? For example, what if some emotionally biasing information (e.g., a graphic description of a crime) distresses jurors in a case where the strict application of the law also seems unfair to them? Nullification instructions provide a license to consult the latter (but *not* the former) feelings – one may legitimately ask how would I feel if I were to follow the law (and produce a verdict that I consider unjust) vs. if I were to nullify the law. But just as feelings due to the weather were taken as information relevant to a wholly different question (viz., life satisfaction; Schwarz and Clore 1983), feelings triggered by emotionally biasing information might be taken as information relevant to the rather different question of "how unfair does the law feel to me in this case?" Thus, jurors distressed by something quite separate from the perceived unfairness of the law might misattribute that distress to the unfairness of the law. The net effect of such a misattribution process would be to produce stronger emotional biasing effects – just the result feared in the *Dougherty* ruling. This reasoning led us to advance the following hypothesis: Nullification instructions will accentuate an emotional bias, but only if the case being considered raises concerns about the unfairness of the law. If the case raises no such fairness concerns, then there should be no unfairness-triggered emotions with which the feelings triggered by an emotional bias might be confused.

To test this hypothesis, we ran a juror simulation study on the Internet (Horowitz et al. 2006). Jury-eligible mock jurors considered a summary of *State v. Dr. Daniel Wood*, in which Wood was charged with first-degree murder. The victim was an elderly man, Henry Bates, who died as a likely result of a drug overdose administered while he was a hospital patient. The defendant, who was the victim's physician, disputed the claim that he had given Bates an overdose. There were two versions of the same basic trial. In the *Non-nullification/Murder version*, the prosecution alleged that Wood's motive was to obtain access to Bates' fortune. In the *Nullification/Euthanasia version*, the prosecution alleged that Wood euthanized Bates to alleviate suffering caused by Bates' terminal cancer; in this version, it was clear that Wood could not profit financially from Bates' death. As an emotional bias manipulation, we varied the character of the victim. In the *Sympathetic victim* condition, Bates was described as a loving grandfather and generous philanthropist, who had bravely endured a 2-year ordeal with cancer. In the *Unsympathetic victim* condition, Bates was described as a demanding invalid, an ex-mobster, and a convicted child molester who may well have abused his own great-granddaughters. Of course, for such information to qualify as biasing, it was important that Bates' character was irrelevant to Wood's guilt. So, for example, the allegations of possible sexual abuse of his granddaughters (which might imply another motive for the killing) did not come to light until well after Bates' death. Finally, mock jurors received either standard instructions ("you must follow the law") or Van Dyke's nullification instructions (including the instruction that "… it is appropriate to bring into your deliberation your own feelings based on your conscience"). The primary dependent variable was jurors' verdict.

As intended, the unsympathetic victim was evaluated much less positively than the sympathetic victim. The primary question was whether and when this dislike of the victim would bias jurors' verdicts. The primary answer was that it was only in one condition that the victim sympathy factor significantly affected jurors' verdicts – the condition in which a conviction of the defendant might be viewed by jurors as an unjust outcome (the Nullification/euthanasia condition) *and* the jurors had received the nullification instructions. Nullification instructions did *not* moderate the effect of victim sympathy more generally (i.e., in a similar trial where the defendant's alleged motive for killing was personal greed rather than to relieve the victim's pain).

But could this effect be attributed to emotional misattribution processes? We suggested that it was only under certain conditions (viz., when one already was wrestling with the emotionally-laden problem of considering an act of euthanasia as meriting a first-degree murder conviction AND nullification instructions appeared to give jurors' license to consult their feelings when deciding whether or not to nullify) that proscribed emotional reactions to the victim might be confused with permitted emotional reactions to the fairness of the law. And it was in this condition (Nullification/euthanasia case + Nullification instructions) only that the victim sympathy factor significantly affected jurors' assessment of how upset they felt after reading the trial transcript. In addition, jurors' reports of how upset they felt passed all standard tests for mediation (Baron and Kenny 1986) of the verdict effect, suggesting that it could well have been these emotional reactions that were the proximal causes of the verdict results.

In a followup study (Kerr et al. 2008), we looked to see if a more carefully worded nullification instruction would have the same bias-enhancing effect. The Van Dyke nullification instructions used by Horowitz et al. (2006) explicitly tell jurors that they may consult their consciences and their feelings when deciding if the law can be justly applied in the present case, but they do not attempt to distinguish between these permitted and other, proscribed emotional effects. In Kerr et al. (2008) we examined three sets of instructions: (1) standard instructions, (2) Van Dyke's nullification instructions, and (3) a new set of nullification instructions that explicitly prohibited jurors from considering feelings or emotions aroused by the various parties in the trial. These "nullification-plus" instructions appended the following to the Van Dyke instructions:

> You must take special care not to confuse other feelings – such as feelings of sympathy or feelings of liking or disliking individuals taking part in the trial – with your evaluation of whether or not the law should be applied in this particular case. You are NOT entitled to let any of your other feelings – toward the defendant, the victim, or anyone else in this trial – affect or bias your verdict.

In this study, mock jurors viewed a PowerPoint revision of the Nullification/euthanasia trial transcript (with attorney, witness, and judge photos) as a narrator read the text. The character of the victim was again varied, using a manipulation much like the one used in Horowitz et al. (2006). There were two key findings in this study: First, the pattern of verdicts with the nullification-plus instructions was indistinguishable from those with the Van Dyke instructions. As prior research

(e.g., Barrett et al. 2001; Schwarz and Clore 1996) would suggest, it may be difficult or impossible for jurors to distinguish between and independently regulate emotional reactions to legally prescribed information (e.g., outrage at an unjust application of the law) and legally proscribed information (e.g., outrage at the misdeeds of a crime victim). Second, victim character significantly affected the verdicts of jurors given the nullification instructions, but not those given the standard instructions. As in prior work (e.g., Horowitz 1985; Horowitz et al. 2006), it appears that nullification instructions can exacerbate jurors' emotional biases.

In summary, although there is little evidence that nullification instructions moderate the impact of jurors' factual biases, or their emotional biases in trials where nullification is not an issue (e.g., the Murder case of Horowitz et al. 2006), there is now accumulating evidence that nullification instructions can and do exacerbate jurors' emotional biases in trials where nullification is an issue. This is a narrow, but potentially significant confirmation of the "chaos theory" advanced by the *Dougherty* court. Furthermore, this evidence is quite consistent with jurors' taking their emotional reactions to one aspect of a trial (e.g., sympathy for a victim) as information relevant to other aspects of the trial (e.g., whether the law can be justly applied in the trial).

Crime Heinousness and Juror Judgment

> *But love is an emotional thing, and whatever is emotional is opposed to that true cold reason which I place above all things.*
>
> Doyle (2003), p. 183, *The Sign of Four*.

Juror Emotion and "Hot" Reason

Holmes clearly believed that "whatever is emotional" interferes with rational thought. But there are other possibilities. One is that the source of emotions can also be the source of information, information with which one could also reason. Such reasoning, accompanied by strong emotions, might not be best characterized as "cold reason", but as "hot reason". However, that emotional heat need not necessarily oppose or distort one's reasoning, as Holmes presumed. In some very recent research on the effects of crime heinousness on juror judgment (Kerr in preparation), I have begun to explore this possibility.

Previously we considered and verified the possibility that emotions stemming from one source (e.g., sympathy for a crime victim) might be misattributed by jurors to another source (e.g., one's feelings about the fairness of the law). But there is another way in which emotions or affect might serve as information for jurors – information which arouses jurors' emotions might simultaneously and independently alter verdict-relevant inferences about the defendant or related facts of the crime.

So, for example, consider a criminal trial in which the defendant is charged with committing a brutal, heinous crime. During the course of the trial, as part of establishing that the crime indeed occurred, the prosecutor may present to the jury graphic images of the victim's injuries (e.g., autopsy photos). Such images are likely (indeed, may be privately intended by the prosecutor) to arouse a number of emotions in the jurors (e.g., disgust, shock, anger). But they may also simultaneously alter a number of other judgments about the perpetrator and (to the extent that the prosecutor's case is strong) the defendant in the case. For example, jurors may be more willing to infer that the perpetrator who could commit such heinous acts is mentally ill. If an insanity defense were being asserted, such an inference could increase the chances of acquittal. Even if an insanity defense were not being pursued, jurors convinced that the defendant acted under diminished responsibility might nullify the law and acquit, as noted earlier.

It seems more likely, though, that the inferences jurors make from a heinous crime would increase the chances of conviction. For example, for many crimes (e.g., first-degree murder), a necessary element is intent. Compared to equivalent, nonheinous crimes, heinous crimes may imply a greater intent to harm a victim (e.g., by suggesting greater planning [bringing instruments of torture to a crime implies the intent to torture]; by showing more persistence [continuing to assault someone long after the person is unconscious implies a rather strong intent to injure]). In this way, jurors shown evidence that the crime was especially heinous might more easily be persuaded that the defendant intended to break the law.

The perpetrator of a particularly heinous act might also be viewed as relatively more dangerous than a perpetrator of an otherwise-equivalent, nonheinous crime. Partially for that reason, the heinousness of the crime is a commonly prescribed aggravating factor that capital punishment juries may consider when making sentencing judgments. However, such considerations may also color juries' verdicts. Several models of juror decision making (e.g., Thomas and Hogue 1976; Fried et al. 1975) suggest that jurors (like statisticians) must weigh the costs of making two errors when they reach their verdicts. If jurors begin with a presumption of innocence (as statisticians begin with a presumption that the null hypothesis is true), then a *juridic Type I error* is falsely rejecting that presumption – convicting an innocent defendant. One way in which a juror can reduce the probability (and hence the costs) of making such an error is to increase the burden of proof (much as the statistician can lower α, the level of statistical significance). Some evidence exists for this process. For example, Kerr (1978) manipulated the severity of the prescribed penalty for a conviction; all other facts of the case were constant. I reasoned that if jurors wanted to avoid the error of convicting an innocent defendant, then increasing the penalty for such a conviction would also increase the costs of making that error – e.g., it is a bigger miscarriage of justice to execute an innocent person than to simply imprison him. Jurors worried about making such an error could reduce its probability by insisting on more or stronger evidence of guilt when the penalty was severe – functionally, they should raise their reasonable doubt threshold. Indeed, I found that conviction rates fell as prescribed penalty increased, and that estimates of jurors' threshold for conviction correspondingly rose.

But for jurors (like statisticians), there is no free lunch. Raising the burden of proof will indeed lower the chances of making the juridic Type I error, but it simultaneously increases the probability of making the *juridic Type II error* – falsely retaining the presumption of innocence, or acquitting a guilty defendant. There is general and wide agreement that the latter error is less serious than the former, quantified in the well-known *Blackstone's ratio* ("better that ten guilty persons escape than that one innocent suffer"; Blackstone 1979). The presumption of innocence is based, in part, upon such value judgments. But no matter how abhorrent it is to punish an innocent person, there are considerations which increase the relative cost of letting a guilty person escape the law's sanction. One is how dangerous the perpetrator is to society. If a relatively harmless perpetrator (e.g., a jaywalker) is mistakenly acquitted, s/he is unlikely to do much further damage to society. But if an extremely dangerous perpetrator (e.g., a serial killer) is mistakenly acquitted, s/he could well do considerably more damage, both to society and conceivably, to the juror him/herself. One way to reduce this risk is for jurors to *lower* their burden of proof – to settle for less evidence of guilt to convict. If a crime is depicted as extremely heinous, besides arousing jurors' passions, it may also arouse their concerns about how dangerous it might be to falsely acquit the defendant, and such concerns could increase the probability of conviction.

Thus, jurors could be horrified by a particularly heinous crime, but also draw any of a number of inferences about the defendant or the facts of the case with which they could (hotly) reason. Note that such inferences could include some that are permitted by the court (e.g., as to the defendant's likely intent or mental health), as well as some that are proscribed by the court (e.g., before sentencing, jurors are proscribed from letting the likely future fate of a convicted or acquitted defendant alter their decision about whether or not that defendant has violated the law). Such "hot" reasoning could proceed in much the same way as it would if the juror were not emotionally aroused – the "true cold reason" so admired by Holmes. On the other hand, the jurors' emotional state could also alter or at least color that reasoning process. For example, jurors might misattribute the horror aroused by learning the details of a particularly heinous crime with the horror they would feel if the defendant were falsely acquitted. In either case, juror emotion might have no immediate or direct impact on juror verdicts; either the emotions would be a symptom of exposure to a heinous crime, but not have any effect on the juror decision making process ("hot" reasoning = cold reasoning), or the emotions would simply exert an indirect effect, coloring that reasoning process ("hot" reasoning = "warmed up" cold reasoning). Let us collectively term these as the "hot/warm reasoning" models.

Juror Emotion Bypassing Juror Reasoning

A long debate in the psychology of emotions has been the role of cognitive appraisals for emotional experience. If I'm in a dangerous situation (e.g., I see a snake), do I have to recognize and interpret that situation as dangerous before I feel the emotion

(e.g., fear) that such situations typically induce? Models of emotion have ranged from those that unambiguously answer yes (e.g., the classic Cannon-Bard theory; Lazarus 1991) to those that suggest that some such appraisal is necessary although not sufficient for emotional experience (e.g., the classic James-Lange theory; Schachter and Singer's (1962) two-factor theory of emotion) to those that suggest that appraisals are unnecessary for many if not most emotional experiences (e.g., LeDoux 1996, 2000; Strack et al. 1988; Zajonc 1980, 1984; Zajonc et al. 1989).

Zajonc (1980) pioneered and summarized the latter class of theories with his claim that "preferences need no inferences" – i.e., one can prefer something, including having a strong emotional response towards it, without an accompanying, intervening cognitive inference or appraisal. Zajonc marshaled a variety of evidence for this thesis, including (a) certain emotional reactions appear in human infants well before certain cognitive skills (e.g., language, long-term memory) that might be essential for making corresponding cognitive appraisals; (b) certain stimuli (e.g., bad smells, heights) appear to produce emotional reactions immediately, without prior experience, and in every culture; (c) changing the meaning or appraisal of a stimulus does not invariably alter one's emotional reaction to it; (d) emotional reactions can be learned even if one is unconscious (and presumably incapable of appraising the environment); (e) certain affective reactions (e.g., a preference for familiar stimuli) appear to occur without recognition of the underlying stimulus features (e.g., awareness of the fact that one has seen the stimuli before); and (f) there are non-cognitive elicitors of emotions (e.g., drugs; electrical stimulation of the brain; certain hormones).

LeDoux's (e.g., 1996) later research has provided one physiological basis for this claim (see Zajonc et al. 1989, for another). He has shown that there can be a kind of sub-cortical "recognition and appraisal" of affectively salient stimuli, leading to a number of patently emotional responses (e.g., autonomic arousal; emotional expressions; "emotional" behavior) without the possibility of an appraisal supported by cortical functions (e.g., seeing the snake or hearing its hiss). LeDoux notes that such appraisals can initiate this process (e.g., thinking about snakes can induce fear) or can color it (e.g., remembering that one left a rubber snake on the table can dampen the fear response that its initial sight triggers), and he speculates that the full emotional response ("feeling" afraid) may also require some cognitive appraisal. But he agrees with Zajonc that there can be rather immediate emotional responses that are not directly caused or mediated by such appraisals.

In the last section, I speculated that trial stimuli that trigger strong juror emotions (e.g., evidence of a heinous crime) could have their impact on juror verdicts not via the emotional response itself, but rather via inferences that jurors draw from those trial stimuli (e.g., the defendant is mentally ill, the defendant is dangerous, the defendant if guilty certainly acted with intent). It was conceded that the emotions might color or intensify those inferences, but this would still represent an indirect and not a direct effect of emotion on juror verdicts. I called such models "hot/warm reasoning" models. But models that assert that "preferences need no inferences" raise the possibility that juror preferences (e.g., for or against a defendant) might be triggered by juror emotions in the absence of any such inferences

– what we might call "unreasoning" models. For example, some theorists (e.g., Rozin et al. 1993) have speculated that feelings of disgust lead directly and nearly automatically to attempts to avoid or shun the source of that disgust. Others (e.g., Berkowitz 2003) have speculated that feelings of anger lead directly to tendencies to confront or attack. Such speculations have rather interesting implications for stimuli (e.g., evidence of a particularly heinous crime) that arouse strong disgust or anger among jurors.

Before describing my own recent attempts to explore these implications, let us briefly review prior research on the effects of the heinousness of a crime on juror judgment (see Bornstein and Nemeth, 1999, for a thorough review).

Crime Heinousness and Juror Judgment: A Brief Legal and Empirical Overview

The heinousness of a crime has been studied both for its permissible and its impermissible impact on juror judgment. When juries are part of the sentencing process (e.g., capital offense trials), the heinousness of the crime is widely accepted as a legitimate aggravating factor. It is interesting that the definitions given to jurors to help them interpret just what constitutes a heinous crime are rather vague; e.g., heinous crimes are described as "atrocious," "cruel," "vile," "wanton," or "inhuman" (cf. Rosen 1986). Apparently, heinousness is one of those things, like pornography, which are more easily recognized than defined. Still, there are indications (e.g., Bowers and Pierce 1980; Geimer and Amsterdam 1988) that crime heinousness is an important reason why capital-trial juries impose the death penalty. However, it is the legally proscribed, impermissible effects of crime heinousness which most concern us here – are jurors/juries more likely to convict if – all else being equal – the crime is relatively more heinous?

Sadly, although there have been many studies on these questions, the empirical literature is a bit of a mess. Although a few studies do find overall effects of purported heinousness manipulations on jury verdicts, guilt ratings, recommended penalties, or civil trial damages (Bright and Goodman-Delahunty 2004; Chew 1999; Douglas et al. 1997; Finkel and Duff 1991; Hendrick and Shaffer 1975; Jones 2003; Oliver and Griffitt 1976), several do not (e.g., Bright and Goodman-Delahunty 2006; Kassin and Garfield 1991; Thompson and Dennison 2004). Sometimes heinousness effects are observed only for certain types of mock jurors (e.g., low-IQ females, Hoiberg and Stires 1973; pro-prosecution jurors, Kassin and Garfield 1991; pro-defense jurors, Thompson and Dennison 2004) or for certain trial conditions (Bright and Goodman-Delahunty 2004; Whalen and Blanchard 1982). Weak manipulations and missing manipulation checks are not uncommon. An all-too-common problem is that manipulations of crime heinousness are often badly confounded (e.g., with the number of criminal acts, the intent of the perpetrator, the formal charges filed, characteristics of the victims, the apparent motives for the crime, and actual damages to the victim; e.g., Chew 1999; Finkel and Duff

1991; Finkel et al. 1994; Hendrick and Shaffer 1975; Hester and Smith 1973; Oliver and Griffitt 1976; White 1987). Very few studies advance or test psychological explanations for such effects; a notable exception is Jones (2003), who linked heinousness effects to perceived costs of committing a juridic Type II error and verdict thresholds. Of special interest to us in this regard are a couple of studies (Bright and Goodman-Delahunty 2006; Douglas et al. 1997) that reported that heinousness effects on verdicts were accompanied by parallel effects on juror emotions, particularly anger.

A related question is whether the mode in which information about crime heinousness is presented moderates its impact. This question reflects the increasing availability of novel technologies for presenting exhibits or other evidence (e.g., videotaped depositions; video re-enactments; wide-screen monitors for displaying exhibits; Feigenson and Dunn 2003).

Crime Heinousness, Mode of Presentation, and Juror Verdicts: An Empirical Study

In a recent study (Kerr in preparation), my colleagues and I have been examining some of these questions. We sought first to manipulate crime heinousness strongly and cleanly (i.e., without confounds). We adapted a stimulus trial used earlier by Jones (2003). In the original trial, the defendant was charged with murder, but we wanted to avoid some of the complications that arise in capital cases (e.g., the requirement of focusing exclusively on so-called death qualified jurors; e.g., Cowan et al. 1984), so the trial facts were altered so that the victim did not die of her injuries and hence, the charge was aggravated assault. The prosecution alleged that the young male defendant gained entry to the victim's home while canvassing the neighborhood for his church. His alleged motive was finding and stealing a recent lottery jackpot that had been won by the victim's grandmother, who was absent at the time of the crime. It was further alleged that the defendant assaulted the victim, a teenaged female, in an effort to compel her to reveal the location of this money. An acquaintance of the defendant testified that he saw the defendant leave the victim's house near the time of the crime. It was further alleged that the defendant took steps to make the crime look like a break-in and robbery (viz., smashing an exterior window); the defendant had a cut on his arm received about the time of the crime. In addition, shoes found in the defendant's home matched a footprint found outside the broken window in size and sole type. Rubber straps like those used to bind the victim were also found at the defendant's workplace. The defense argued that the defendant had knocked but never been admitted to the house of the victim. It also suggested that the eyewitness was mistaken about the time he saw the defendant, perhaps intentionally so due to an old grievance against the defendant. The defendant further claimed that the cut had been caused by an accident in his home. There were no fingerprints, blood, or DNA of the defendant found at the scene of the crime, and the matching shoe was a common size. Furthermore, the defendant had

voluntarily contacted the police after the crime in response to a media appeal for potential witnesses to come forth. This stimulus trial had been carefully pretested to insure that the base conviction rate was moderate (~50%). The final trial was presented as a PowerPoint presentation with photos of all courtroom actors (viz., the judge, attorneys, and all witnesses) and the transcript text. To control the trial presentation time, a narrator's recording of the transcript was played while the jurors listened (and read along, if they chose).

It can be tricky to vary the heinousness of a crime cleanly – that is, without confounds. Our approach was to vary testimony and exhibits provided by the victim's physician. In the Low Heinousness condition, she testified briefly about the nature of the victim's injuries and provided no photographic evidence of those injuries. In the High Heinousness conditions, she provided considerably more detail about those injuries and indicated that they were consistent with the victim having been tortured. In addition, four graphic images were admitted as exhibits: (1) one of the victim's bloody and battered face upon admission to the hospital, (2) one of the victim's bloody hand, with many cuts and three fingers missing, (3) one of the victim in a hospital bed, and (4) one showing a contrast of the victim's appearance from before to after the crime. It is important to note that this additional material did not alter the charges against the defendant, the elements necessary for a conviction, the final degree of injury to the victim (the victim was in a vegetative state and unable to provide any help to police investigators), the alleged motive of the perpetrator, or any other aspect of the evidence in the case. Half of the mock jurors who viewed the High Heinousness version received the images in notebooks of still photographs, a traditional modality for presenting such evidence; this comprised the High Heinousness/Photo condition. The remainder viewed the same images but on the same video screens on which the rest of the stimulus trial was presented; this comprised the High Heinousness/Screen condition.

Jury-eligible mock jurors first provided reports of their current emotional state using an expanded version of the PANAS (Watson et al. 1988). They then viewed one of the three versions of the trial (Low Heinousness, High-Heinousness/Screen, High Heinousness/Photo), including the judge's instructions. They then indicated how heinous they considered the crime to be, and provided a post-trial assessment of their emotions. Then the primary dependent variables were collected (viz., dichotomous verdict preferences; confidence in verdict; guilt ratings; sentence recommendations; evaluations of the perpetrator, defendant, and victim).

Earlier we contrasted two generic models of the impact of juror emotion on juror decision making. One (unreasoning model) held that juror emotion aroused by a heinous crime might directly impact juror verdicts – juror verdict preferences might require no juror inferences. The other (hot/warm reasoning) held that juror emotion had no such direct effect, but that the proximal mediator of any crime heinousness effect was some other inference about the defendant or the facts of the case. To examine the latter possibility, we assessed a number of such potential inferences, including (1) the perceived intent of the perpetrator to commit the crime, (2) the perceived mental illness of the perpetrator, (3) the perceived damage done by the perpetrator, (4) the perceived dangerousness of the perpetrator (both to society in

general and to the juror in particular), (5) the perceived cost of making a juridic Type I or Type II error (from which jurors' reasonable doubt thresholds might be estimated; see Fried et al. 1975), and (6) jurors' identification with (i.e., perceived similarity to) the victim. If crime heinousness affected juror verdicts, it was of interest to see if any of these inferences or judgments could plausibly mediate such effects. If none could, but emotional reactions could, then some support for the unreasoning model might be claimed.

We first checked to make sure that we had successfully modified jurors' perceptions of the heinousness of the crime. A composite measure of how cruel, despicable, brutal, and shocking the crime was perceived to be clearly confirmed that the Low Heinousness version of the trial produced lower ratings than either of the High Heinousness versions, which did not differ from one another. Subsequent analyses of juror verdicts revealed a rather interesting pattern (see Fig. 4.3): exposure to the Screen version of the high heinousness information did not alter jurors' verdicts (relative to the low heinousness controls), but exposure to the Photo version did. These two modes of presentation differed in several regards besides the medium in which the images were displayed; for example, compared to jurors in the Screen condition, jurors in the Photo condition had to physically handle the exhibits, were spatially closer to the images, saw a larger image (in terms of visual angle), had no transcript text appended beneath the image (to which they might redirect their attention), and had other copies of the images in their peripheral visual field (i.e., the folders of jurors seated nearby). However, this pattern of results also raises the intriguing possibility that graphic and emotionally arousing images might have less

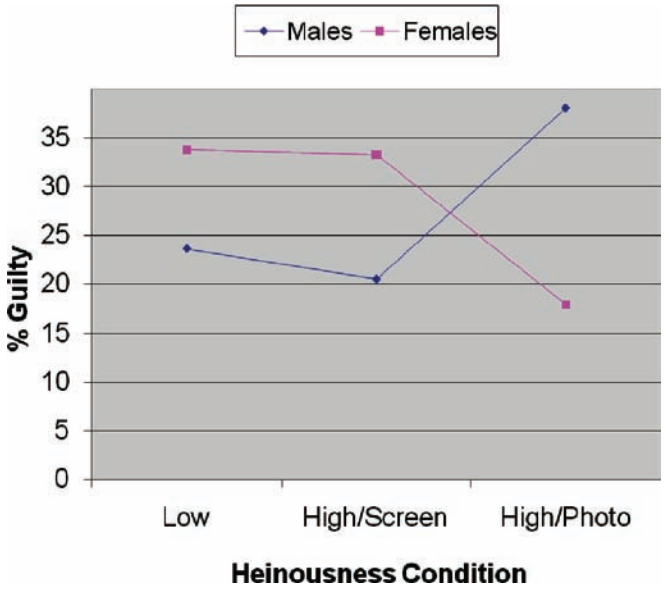

Fig. 4.3 Effects of crime heinousness and juror gender on mock juror verdicts (Kerr in preparation)

impact on jurors when presented on video screens than when presented in a more traditional medium (e.g., physical exhibits, still photographs). It is apparent that graphic images of violence are increasingly common in video games, television programs, movies, and on the Internet, and are all presented on some type of projection screen. Some research (e.g., Carnagey et al. 2007) also suggests that frequent exposure to such images can result in a desensitization to them. What is intriguing here is the possibility that such desensitization might be medium specific, that images to which one has become desensitized in one presentation medium (e.g., projection screen) might still produce strong reactions when presented in a different medium (e.g., still photograph).

A related and interesting possibility is that viewers might come to associate the "reality" of certain images with the mode of presentation. Most photographs that we encounter are of real people, places, or events. Most graphic violence in movies, television, and video games, on the other hand, is fictional. Might people gradually come to assume at some level that any depiction of violence presented in the latter mode is, in some sense, unreal? Of course, such speculation implicates the extent and type of experience one has had with fictional and nonfictional presentations of graphic violence as an important moderating variable. In the present study, the mock jurors were college students, who probably have had greater exposure to violent video games, "slasher" films, etc. than an older, nonstudent juror population, Although significant differences between student and nonstudent mock jurors appear to be rare (Bornstein 1999), their respective reactions to screen presentations of violence could be an interesting exception to that rule.

A second, unexpected finding was that the effect of the High Heinousness/Photo version was moderated by the gender of the juror (see Fig. 4.3). Males reacted as one might anticipate – they were more likely (~17% more likely) to convict the defendant in the High Heinousness/Photo condition than in the Low Heinousness condition. But female jurors reacted in precisely the opposite way – they were less (~16% less) likely to convict the defendant in the High Heinousness/Photo condition than in the Low Heinousness condition! The latter effect verified that presentation by the prosecution of highly graphic evidence of crime heinousness to shock or outrage the jury may sometimes backfire, actually reducing the probability of conviction. But that leaves open the important question of just when and how this occurs. For example, in the present study, there are several possible mediating processes:

- The introduction of the evidence of heinousness (testimony and photographs) occurred at the prosecution's initiative. The defense's objection to this evidence was overruled. It is possible that female jurors blamed the prosecutor for the necessity of considering this disturbing evidence, and expressed that sentiment by rejecting the prosecutor's theory of the case. (However, this reasoning requires some explanation for why the females and not the male jurors would blame the prosecutor. Also, although females felt, on average, that the crime was more heinous than males, this difference was not moderated by the heinousness condition [i.e., females did not see the crime as particularly more heinous in the Photo condition].)

- Jurors presented with particularly disturbing evidence of crime heinousness (e.g., in the present High Heinousness/Photo condition) could have reduced their attention to the trial. Anecdotally, our experimenters noticed that some mock jurors closed their eyes or looked away from the images of the injured victim. Such inattention could also take the form of ignoring the ongoing testimony, which would, in the short term, disadvantage the prosecution (during whose presentation the evidence of heinousness was presented). So, if female jurors coped with this stressful evidence by paying less attention to the trial, they might have been less willing to convict. (Of course, this begs the question of why females, but not males, would cope in this way.)
- To obtain a conviction, the prosecution must convince the jury that the defendant is capable of committing the crime with which s/he is charged; the jury is less likely to convict when the character, appearance, or past behavior of the defendant is highly inconsistent with the criminal act. Hence, the more improbable the criminal act, the less likely any given defendant who is otherwise (i.e., other than the specific evidence of the crime) unobjectionable will be seen as guilty. If females in the Photo condition saw the crime as unusually bizarre, they might have seen it as less likely that this particular defendant (who had no history of mental illness and no record of bizarre behavior) committed the crime. There are some hints in our data consistent with this interpretation – compared to males, females were especially likely to rate the crime as inhumane in the High Heinousness/Photo condition.
- Taylor et al. (2000) have suggested that there are reliable gender differences in response to stress. Specifically, while males tend to adopt a "fight or flight" response, females are relatively more likely to adopt a "tend and befriend" response. The latter emphasizes nurturant behavior and the creation and maintenance of social ties. Such behavioral gender differences are the result, it is suggested, of hormonal differences (e.g., with females more likely to have elevated oxytocin levels under conditions of stress). In the present context, males' particularly punitive responses toward the defendant in the High Heinousness/Photo condition are consistent with a "fight" response to the stress of the heinousness evidence, whereas the females' relatively lenient responses in that condition are consistent with a "tend and befriend" response toward the defendant. Of course, this begs the question of why female jurors would not "tend and befriend" the victim of the crime. One answer is that it is the fate of the defendant (and not the victim) that is most immediately of concern to the jurors.

Each of these explanations of the gender moderation effect is clearly testable (e.g., one could collect data on attitudes toward the prosecution, memory for trial facts before vs. after presentation of heinousness evidence, perceived similarity between the defendant and the perpetrator, and oxytocin levels).

The most interesting theoretical question posed by these verdict results was whether they could be mediated by any of several inferences that might be drawn from a highly heinous crime (the hot/warm reasoning model), or instead, could be shown to be a more immediate result of the jurors' emotional reactions to such a

crime (an unreasoning model). To check the former possibility, we examined the six potential mediators noted above (viz., intent, mental illness, harm done, dangerousness, reasonable doubt threshold, and perceived similarity to the victim). Successful mediation required that (1) the purported mediator should produce a gender x heinousness interaction effect parallel to that observed for jury verdicts, and (2) the verdict interaction should be eliminated or attenuated when the mediator served as a covariate. Each of the six variables failed one or both of these tests; thus, there was little support for the notion that the (Photo) heinousness altered jurors' verdicts simply by altering jurors' inferences about perpetrator intent, mental illness, etc.

To explore the mediating role of emotions, per se, we first composed several indices using standard PANAS scoring (viz., positive affect, negative affect, hostility, fear, sadness, and guilt) and a scale of vengefulness designed for this study (the average of ratings of how unforgiving, vengeful, pitiless, and revengeful participants felt), based on both pre-trial and post-trial emotion ratings. We then computed post–pre difference scores to summarize the emotional impact of viewing the trial on each of these seven emotion measures. We then subjected each of these difference scores to the same two mediation tests outlined above. Two of the emotion measures passed both tests – Hostility and Vengefulness. Exposure to the Photo version of the heinous crime increased males' anger and vengefulness, but decreased these emotions for females (see Fig. 4.4). Moreover, the heinousness x gender interaction effect on verdicts was no longer significant after entering either of these two variables as covariates.

Of course, these analyses are not conclusive. To begin with, since this is a first attempt to address these questions, our conclusions are necessarily somewhat tentative and would clearly benefit from replication. Moreover, it is possible that the proximal mediator of the effect of (Photo) heinousness observed here could be some juror inference that was not directly assessed in our study (e.g., the perceived similarity of the defendant to the imagined perpetrator). Nevertheless, the data we do have in hand are most consistent with a rather direct impact of jurors' feelings of anger and/or vengefulness on jurors' verdicts, unmediated by any juror appraisal of the defendant or facts of the case. That is, the most parsimonious interpretation of our findings is that the effects of juror emotional responses on juror verdict preferences required no inferences by jurors about the trial evidence.

Summary and Concluding Thoughts

> *These are much deeper waters than I had thought.*
>
> Doyle (2003), p. 480, *The Reigate Puzzle*

I have described a trio of studies that illustrate just a few of the ways in which jurors' emotions can affect their verdicts. The first showed that biasing information which arouses strong emotions may persist and resist remedy in ways that comparable non-emotional biases do not. The second showed that jurors will sometimes use

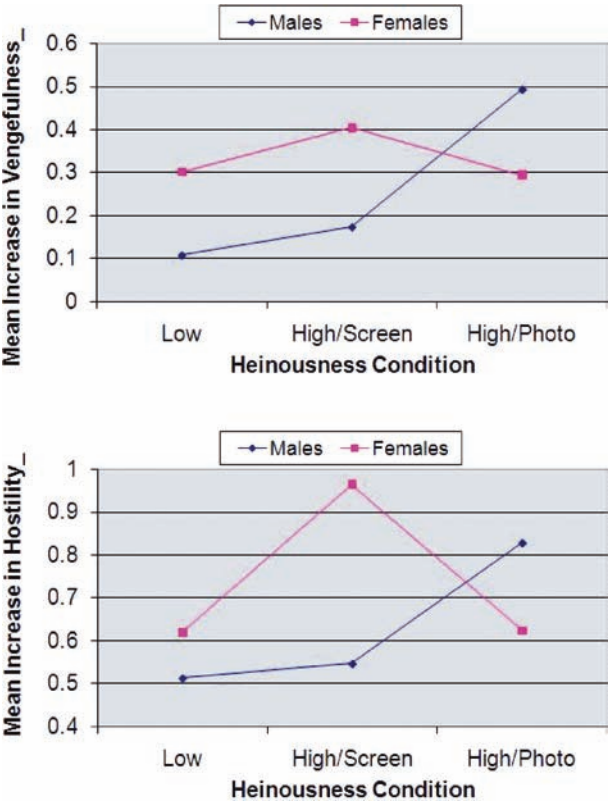

Fig. 4.4 Effects of crime heinousness and juror gender on mock jurors' hostility and vengefulness (Kerr in preparation)

their emotions as information relevant to their verdicts. And the third suggested that juror emotions could have rather direct effects on jurors' verdicts without necessarily altering their appraisal of the defendant or trial evidence. I have further suggested that there are likely to be other processes resulting in similar emotional effects (e.g., emotions triggering different modes of juror information processing; emotions cuing emotionally-congruent memories).

Our findings raise as many (if not more) questions than they answer. Among these, particularly interesting questions include: Do similarly valenced emotions (e.g., anger vs. fear vs. sadness) have similar effects? How aware are jurors of the effects of their emotions on their judgments? Do juror emotions ever enhance their decision making? Are there effective remedies for the undesired effects of juror emotion? Can the diverse effects of juror emotion on juror judgment be understood and explained within a single, unified theory?

I began this chapter by suggesting that the study of emotion in the law was data poor, and that we needed to follow Holmes' appeal for more and better data before we could develop useful theory and hypotheses. But, even though there are many

similarities, developing a powerful scientific theory about a broad topic like the effect of juror emotion on juror judgment is not quite like a detective developing a useful theory of a single crime. It may indeed be a capital mistake in the latter case to hypothesize about the crime before one knows the facts, but when it comes to hypothesizing about the role of juror emotion for juror judgment, I suspect that there are not a small and finite set of relevant facts nor a single pat solution. Rather, it seems likely that the rich complexity that seems to characterize the links between affect/emotion and cognition/social cognition outside the law (e.g., Forgas 2006; Schwarz and Clore 2007) will be fully reflected within legal settings (Feigenson and Park 2006). And in this area, like most areas of scientific study, good progress will require both good ideas and solid facts – the simultaneous and interactive efforts of skilled theorists and experimentalists. Achieving such progress promises to be anything but elementary, my dear reader.

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Chapter 5
Inner Terror and Outward Hate: The Effects of Mortality Salience on Bias Motivated Attacks

Joel D. Lieberman

Inner Terror and Outward Hate: The Effects of Mortality Salience on Bias Motivated Attacks

In 2008, a year that an African American man was elected President of the United States, and same sex unions were temporarily legalized in California and recognized in New York, reminders of intolerance and prejudice remained strong. Immediately following the election of Barack Obama, there was a surge in bias motivated attacks across the country, with derogating and intimidating remarks delivered by adults and even children as young as second-graders (Associated Press 2008). Further, shortly after the same sex unions were legalized in California, a majority of California voters supported "Proposition 8," restricting the definition of marriage to that of a union between a man and a woman. In addition, during the previous year, nooses were displayed in various locations throughout the country such as on school grounds in Jena, Louisiana and on college campuses including the University of Maryland and Columbia University (Associated Press 2007). In addition, on February 12, 2008, in Oxnard California, an eighth-grader, 15-year old Lawrence King, was shot in the head and killed by a fellow student, 14-year old, Brandon McInerney. Apparently King, who often dressed in a feminine manner, had asked McInerney to be his valentine the day earlier (Newsweek 2008). These types of bias motivated attacks as well as others that have previously captured the nation's attention reveal the darker side of humanity. Although basic cognitive processes that cause individuals to classify others as either ingroup or outgroup members are likely relevant in such attacks, basic categorization on its own may not be sufficient to unleash the anger that is sometimes apparent in hate crimes, such as that of the King murder. As a result, these crimes require additional psychological explanations to help us more clearly understand the underlying motivations that produce such behaviors. This chapter will explore a variety of social psychological

J.D. Lieberman
University of Nevada, Las Vegas, NV, USA
e-mail: jdl@unlv.nevada.edu

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theories that have been used to explain prejudicial attitudes and behavior that foster bias motivated crimes, with a particular focus on Terror Management Theory.

Definition of Hate Crimes

Crimes motivated by prejudice have been committed throughout the history of the United States (Burrows and Wallace 1999; Jacobs and Potter 1998). However, in the mid-1980s a series of racially inspired murders in New York City focused the nation's attention on such attacks, and the term "hate" began to be used in the context of bias motivated crimes (Jacobs and Potter 1998; Levin 2007). In order for a crime to be classified as a hate crime it must, of course, meet the specific criteria for bias motivated offenses in the jurisdiction in which the crime occurs. At the federal level, hate crime legislation has existed since the late 1960s, when, in 1968, Congress passed the Civil Rights Act (1968) (18 United States Code, Section 245) which protects citizens from victimization based on race, color, religion, or national origin (Jacobs and Potter 1998). In 2007 the House of Representatives passed the Matthew Sheppard Act (i.e., the Local Law Enforcement Hate Crime Prevention Act (2007); HR 1592) that expanded protected characteristics to include gender, gender orientation, and disability. The Senate passed similar legislation that same year. However, congress ultimately dropped the bill, in part, over concern of a threatened veto by President Bush (Hulse 2008). Barack Obama has indicated he supports the Matthew Sheppard Act, so there is potential for such legislation to be passed under the new administration (http://origin.barackobama.com/issues/civil_rights//).

At the state level, almost all states have adopted specific hate crime laws (Anti-Defamation League 2008). The only absolute exception is Wyoming, although Georgia, Indiana, Arkansas (which allows civil action) only target institutional vandalism (e.g., property damage to churches/synagogues). The statutes have provisions that typically cover race, religion and ethnicity (in 44 states), sexual orientation (30 states), and disability (30 states). In addition, 26 states include gender, 13 states include age, 10 states include transgender/gender identity, and five states include political affiliation as protected characteristics.[1]

[1]For example, New York has a fairly comprehensive hate crime law that states "1. A person commits a hate crime when he or she commits a specified offense and either: (a) intentionally selects the person against whom the offense is committed or intended to be committed in whole or in substantial part because of a belief or perception regarding the race, color, national origin, ancestry, gender, religion, religious practice, age, disability or sexual orientation of a person, regardless of whether the belief or perception is correct, or (b) intentionally commits the act or acts constituting the offense in whole or in substantial part because of a belief or perception regarding the race, color, national origin, ancestry, gender, religion, religious practice, age, disability or sexual orientation of a person, regardless of whether the belief or perception is correct. 2. Proof of race, color, national origin, ancestry, gender, religion, religious practice, age, disability or sexual orientation of the defendant, the victim or of both the defendant and the victim does not, by itself, constitute legally sufficient evidence satisfying the people's burden under paragraph (a) or (b) of subdivision one of this section." (Retrieved from http://criminaljustice.state.ny.us/legalservices/ch107_hate_crimes_2000.htm December 17, 2008).

Hate Crime Statistics

Despite variations in hate crime legislation, the 1990 Federal Hate Crime Statistics Act requires the Federal Bureau of Investigation (FBI) to collect data on crimes that "manifest prejudice based on race, religion, sexual orientation, or ethnicity." In 1994, the Violent Crime Control and Law Enforcement Act mandated "disability" to be added as a category for data collection.

Although there is natural annual fluctuation in the rate of hate crime reporting, the typical distribution of offenses tends to be generally stable. In 2007, there were a total of 7,624 bias motivated criminal incidents indicated in the FBI's Uniform Crime Reports (UCR). The most common motivation for these incidents was racial bias (50.8%), followed by religious bias (18.4%), sexual orientation bias (16.6%), ethnicity/national origin bias (14.0%), and disability bias (1%). It is worth noting that these statistics reflect reported crime, and as a result, inevitably underestimate true crime levels, as victims may not report crimes for a variety of reasons. Crime under-reporting is always an issue to consider when interpreting UCR data, however, the problem is magnified when a particular stigma may be associated with victimization, such as with a sexual assault, or in the case of bias motivated crimes, when a person is victimized because of sexual orientation.

An analysis of the UCR data for the type of crimes committed indicates that destruction/damage/vandalism are the most frequently reported hate crimes (38.2% of cases) followed by intimidation (26.8%), simple assault (18.5%), and aggravated assault (11.2%). Although homicides may capture media attention, they are a relatively rare hate crime. For example, only nine people were murdered in 2007 (up from three in 2006). Other crimes such as robbery, burglary, larceny-theft, arson, and forcible rape are also rare (7.9% when combined together).

Unique Characteristics of Hate Crimes

A closer analysis of UCR data and narrative accounts of bias motivated attacks indicates that hate crimes often have a number of unique characteristics that are distinguishable from traditional forms of crime. First, the attacks are usually committed as random, spontaneous acts by young, white males (in 2007, 50% of attacks were committed by white males and only 14% committed by black males). Second, there is almost always more than one offender involved in an incident. Third, there is typically no secondary crime committed during the attack. For example, a person will be beaten but will not be subsequently robbed of money or valuables they posses during the attack. This is evidenced by the fact that in 2007 within the 7,624 reported incidents there were only 9,535 offences reported.

Finally, although violent attacks classified as aggravated assaults or homicides are far less frequent than other types of bias motivated crimes such as destruction/damage to property, when violence occurs it may be excessive. For example, on June 7th, 1998, James Byrd Jr., a 49-year old black man in Jasper, Texas, was

beaten and then chained to a pickup truck before being dragged to his death along a two-mile stretch of the road where his head and right arm were found the next day (Altschiller 1999). A similarly horrific attack occurred on February 19, 1999, in Sylacauga Alabama when Billy Jack Gaither, a homosexual, was beaten to death with an axe before his body was burned on a pyre of tires. His assailants reported that they committed the murder because "he made a pass at them" (Altschiller 1999, p. 51). The behaviors of dragging a person to death behind a pickup truck, and burning a body after bludgeoning it with an axe go far beyond what is necessary to inflict pain and injury to a person. These behaviors display an underlying rage and desire to destroy the body of the victim.

Another unusual aspect of hate crimes is limited sympathy that may be expressed by some for the victim. Although, in most cases of anti-black or anti-Jewish hate crimes, there is general moral outrage, the same cannot be said in many cases of anti-gay crimes. For example, at Matthew Sheppard's funeral the mourners were confronted by the Rev. Fred Phelps from Kansas and his followers who carried signs that read "God hates fags" and "Fags deserve to die" (Altschiller 1999). Further, in a 1988 case involving the beating death of a gay man, a Broward County, Florida judge jokingly asked the prosecuting attorney "That's a crime now, to beat up a homosexual?" The prosecutor replied "Yes sir. And it's also a crime to kill them." The judge reportedly replied "Times have really changed" (Janness and Broad 1997, p. 50). Overall, it is difficult to provide a rational explanation for why a group of individuals attack a total stranger, use excessive violence, and take no money or personal possessions. However, a closer analysis of the motivations behind hate crime attacks sheds light on this issue.

Motivations Behind Hate Crimes

McDevitt et al. (2002) developed a typology of offender motivations by analyzing 169 Boston police case files. They identified four main motivations for offenders. The most common motivation was that of a desire for thrills or excitement. Two-thirds (66%) of offenders (often youths) reported to police that they committed bias motivated attacks for fun or to overcome boredom, a finding supported by other research (Byers et al. 1999; Franklin 1998; Parrott and Peterson 2008). The second most common motivation (25% of cases) was "defensive" based attacks that were committed to protect territory (i.e., neighborhoods) from outsiders, and to send a message that the outsiders should move elsewhere. Such attacks are typically associated with demographic changes in neighborhoods (Green et al. 1998). Retaliatory behavior was the motivation for attacks in 8% of cases. In such cases, an initial incident (or simply a rumor of an incident) leads to a retaliatory attack on a targeted group, so that a group's honor may be avenged. Members of that targeted group may then respond with their own bias motivated attacks against the offender's group, leading to a spiraling escalation of conflict. A final motivation involving "mission" based attacks was also identified. These attacks are a product of an

offender's lifestyle, which is devoted to opposing (and ideally eliminating) members of specific groups. This type of offender may act alone, or belong to organized hate groups, such as the Ku Kluk Klan or other white supremacist groups. Mission offenders were extremely rare, accounting for less than 1% of the hate crime offences analyzed by McDevitt et al.

Theoretical Explanations for Prejudicial Behaviors

Hate crimes are, of course, inherently related to issues of prejudice, as well as notions of justice and equity. Social psychologists have long studied the topic of prejudice, and developed numerous theories that provide causal explanations for prejudice. Duckitt (1992) has articulated an integrative framework for conceptualizing the causation of prejudice, in which theoretical explanations for prejudice can be classified as having different levels of analysis focused on the individual, on interpersonal interaction, on social group interaction, or on underlying psychological processes.

Individual Level Theories

The individual level of analysis focuses on better understanding who is likely to hold prejudicial attitudes that, ultimately, would foster hate crimes. For example, authoritarians, those who are of lower socio-economic status, are moderately religious, or are politically conservative tend to exhibit higher levels of prejudiced attitudes than others on these personality dimensions (Duckitt 1992). However, work in the area of individual differences typically does not fully address why such attitudes are developed and held in the first place. Thus, it is necessary to look at alternative explanations.

Interpersonal Theories

Interpersonal theories focus on how prejudicial attitudes are transferred to the individual. Group norms and conformity pressures are emphasized with interpersonal explanations (Duckitt 1992). Normative influences lead individuals to comply with others to gain rewards and avoid sanctions or disapproval (Worchel and Cooper 1976). As a result, normative explanations may be useful in understanding thrill-seeking behavior for small groups of offenders who convince each other to engage in a bias-motivated crime. Alternatively, "true conformity" (Worchel and Cooper 1976) that results from accepting information, rather than simple situational compliance with others, may provide insight into the "mission" oriented offender, who

is not motivated by situational norms, but rather engages in bias-motivated crimes as a lifestyle. However, explanations that focus on the transmission of prejudicial attitudes do not address the more fundamental issue of how the attitudes originally developed or the purpose that their perpetuation serves. Other theoretical explanations focused on intergroup dynamics and underlying psychological processes are needed to more fully understand hate crime motivations.

Social Group Interaction Theories

Social group interaction theories address the conditions under which intergroup interactions produce prejudicial responses. Perhaps the best known work in this area is realistic group conflict theory (Sherif 1967) which maintains that prejudice is not an irrational behavior, but rather the functional response to groups in competition for valued resources. Intergroup conflict may also emerge when one group is in a dominant position relative to another group, and in cases of intergroup scapegoating, where an outgroup is blamed for misfortunes befalling the ingroup in a manner that is beneficial to the ingroup (Duckitt 1992). For example, Jews were blamed for Germany's economic depression during the 1930s, allowing the government to be absolved for failing to rectify the financial situation. Other social group interaction theories focus on "social competition" and the need to compete for status and prestige (Hogg and Abrams 1988) or can be explained by "intergroup contact conditions" where factors such as the differential treatment of groups and relative group size affect the likelihood of prejudicially based interaction between groups. Social group interaction theories appear to be quite useful in understanding longstanding conflict between groups. However, theories of this nature do not necessarily address a more fundamental question of why it is important for individuals to feel superior to others. In some cases, the answer may be clear, such as when an individual personally benefits in a zero-sum interaction with members of an outgroup. However, in situations where an individual does not directly benefit (e.g., it is not the individual that gains resources or status, but a fellow ingroup member) the answer is not as clear. Perhaps the ultimate example of such behavior is martyrdom, where a person sacrifices their life for a group or cause they identify with. Despite the utility of intergroup conflict theories, it is necessary to examine underlying psychological processes that foster a need to distinguish oneself from others and to ultimately express superiority toward outgroups.

Underlying Psychological Process Theories

A number of theoretical explanations address universal psychological processes that could underlie an inherent human potential for prejudice (Duckitt 1992). Theories such as frustration-aggression theory, belief similarity (congruence),

cognitive categorization, and social identity theory are some of the prominent explanations for prejudice in this category.

Frustration-Aggression Theory

Frustration-aggression theory (Dollard et al. 1939; Miller 1941) posits that when individuals have been sufficiently provoked they often become angry, and if circumstances permit, they may aggress directly at the provoking source. However, in many situations it may be impossible to aggress against the actual provoking source. Factors such as physical limitations, as well as social or economic sanctions, may exist that inhibit such behavior. When inhibiting factors are present, an individual may turn his or her aggressive impulses to a secondary target that actually had nothing to do with the provocation.

Displaced aggression has been applied to a wide range of phenomena and has been used to explain criminal behavior as well as racial, ethnic, and religious oriented prejudice including lynchings (Tedeschi and Norman 1985). For example, several empirical investigations have identified strong relationships between the number of lynchings of Blacks in southern states and economic growth or cotton prices, with lynchings increasing in time periods where an economic downturn had occurred (e.g., Beck and Tolnay 1990; Hepworth and West 1988; Hovland and Sears 1940; Olzak 1990). However, the utility of frustration-aggression theory to explain lynchings during this time is reduced by the fact that the aforementioned studies tend to limit their analyses to the time period between 1882 and 1930. Green et al. (1998) found that the trend between lynchings and economic conditions did not continue during the Great Depression of the 1930s. Further, Green et al. examined contemporary hate crimes (between 1987 and 1995) in New York City and found little evidence that linked varying economic conditions to changes in rates of reported racial, religious, ethnic, or homophobic attacks (see also Krueger and Pischke 1997, and Green and Rich 1998). Thus, it is not clear that frustration-aggression theory can fully account for motivations behind hate crimes. In addition, although frustration-aggression theory may account for certain types of hate crimes such as defensive or retaliatory attacks, it may not be able to account for thrill-seeking attacks that are more spontaneous in nature.

Belief Similarity

Belief similarity/belief congruence theory (Byrne 1971, Newcomb 1961) maintains that individuals seek out and respond positively to those similar to themselves, but avoid and dislike those who are dissimilar. Although there is considerable support for this theory, it does not address the larger question of why we need to surround ourselves with similar others. Individuals who share our values may reinforce our own beliefs and consequently boost our self-esteem, but why do humans need to maintain high self-esteem in the first place? The important role of self-esteem is addressed in

other theories discussed later in this chapter. Further, the fact that we are drawn towards similar others, does not by itself explain why individuals have a need to derogate or attack dissimilar others, unless such attacks are designed to motivate victims to adopt the beliefs of the attacker. However, this possibility again raises the question of why are individuals so motivated to surround themselves with similar others?

Cognitive Categorization

An alternative psychological process explanation is that of cognitive categorization (Tajfel 1981). According to cognitive categorization theory, individuals automatically classify objects into groups to facilitate information processing. As part of that classification process, people are categorized as ingroup or outgroup members. Group categorization occurs on the most minimal distinctions between individuals (e.g., preference for abstract artist or coin flip).

Kovera (2007) has noted that there is considerable social psychological research indicating that categorization can lead to the automatic activation of stereotypes that influence judgments, as well as affect and behavior toward group members. In order for hate crimes to be committed, it would appear to be critical that such categorization and negative stereotype activations and applications occur. That is, standard definitions of hate crimes require that a victim be targeted because of his or her status (a categorization process) and that the victim not have a direct preexisting relationship with the offender, necessitating that the offender applies general beliefs or negative affect regarding a group they possess to a victim.

However, as Kovera (2007) notes, it may be possible to control the influence of such stereotypes and that situational norms may motivate individuals to control their cognitive processes to avoid discriminatory behavior. In addition, even if one was unable to control the influence of automatically activated cognitions, there is no guarantee that the influence of such cognitions would extend beyond discriminatory judgments to overt destructive behavior. For example, just because a white employer may be unable to control his or her stereotypes from influencing a judgment of a black job applicant making him or her less likely to hire the applicant, does not mean that the employer would also be likely to physically assault a randomly selected black person or set fire to a church with a predominately black congregation. Thus, even though cognitive categorization and automatic thought processes may be necessary components in the commission of hate crimes, these theoretical explanations do not appear to provide sufficient motivation for an individual to display the behavioral ugliness demonstrated in hate crime attacks. Consequently, it is necessary to explore the contributions of other psychological process explanations.

Social Identity Theory

Social identity theory builds on cognitive categorization and maintains that individuals can derive positive self-esteem either through their own achievements (via a personal identity) or through the achievements of groups they affiliate with

(a social identity) (Brown 1985; Tajfel 1981). Self-esteem can also be enhanced when one's group is viewed as superior to another. As a result, when individuals are automatically categorized into groups they exhibit ingroup bias and tend to distribute rewards in a manner that differentially advantages ingroup members over outgroup members. Cognitive categorization and social identity theories demonstrate that long-standing conflict between groups or competition for scarce resources is not necessary for prejudice to arise and intergroup conflict to occur. Rather such conflict can be the result of the most arbitrary of distinctions between individuals in an effort to boost one's self-esteem through the success of a group that a person identifies with. Thus, the need for self-esteem enhancement may produce a strong desire to feel superior to others. The commission of a bias-motivated crime may provide a direct avenue for demonstrating one's superiority over outgroup members. However, we are still left with a fundamental unanswered question: Why are humans so driven to maintain high self-esteem? Terror management theory (TMT) attempts to address this question and provide an explanation for why the need to maintain high self-esteem has led humans to historically engage in destructive behavior towards outgroups.

Terror Management Theory

TMT (Greenberg et al. 1997; Pyszczynski et al. 2003) was inspired by the writings of cultural anthropologist Ernest Becker (Becker 1973). TMT maintains that although humans have many similarities to other animals in terms of sharing basic instincts, including a need for self-preservation, humans are unique because of their sophisticated cognitive abilities. The advanced cognitive capacities of humans allow for concrete temporal thought, self-reflection, and symbolic thought. However, because humans are aware of themselves existing in time, and capable of thinking abstractly, they are capable of clearly envisioning a point in the future when they will no longer exist. Thus, humans have a unique capacity to contemplate their own mortality. Further, humans understand the unpleasant reality that life can be extinguished at any time as a result of a multitude of factors beyond their control such as accidents, diseases, or the unprovoked hostile behaviors of others. The realization that death is inevitable creates profound anxiety for people.

TMT posits that this potential for paralyzing terror is managed through the development of, and investment in, *cultural worldviews*. Cultural worldviews are individual constructs that represent the adoption of cultural information and experiences. These belief systems allow individuals to perceive the world as a place with order, meaning and permanence. Cultural worldviews set up standards of values in a society in the form of morals, ethics, or more formally laws. When these prescriptions for valued behavior are fulfilled, individuals' self-esteem is enhanced. In turn, individuals are provided with a sense of importance, protection, and ultimately death transcendence, either literally, through beliefs such as reincarnation or heaven, or in a symbolic form by leaving behind evidence of one's existence.

For example, symbolic immortality could be achieved through accomplishments such as producing art or music, winning awards, through monuments to one's existence, or by engaging in other activities particularly valued by a culture. Thus, successful terror management requires both faith in a cultural worldview and belief that one is living up to the standards of value prescribed by the worldview. As noted above, self-esteem plays a critical role in this process, and reflects the sense that cultural standards of value have been met or surpassed. Consequently, according to TMT, self-esteem functions as an anxiety buffer against concerns stemming from one's vulnerability and mortality (Arndt and Greenberg 1999).

However, by nature, worldviews are culturally relative, leading certain behaviors to be highly acknowledged and others to be ignored if not denigrated. For example, in the United States, the ability to hit a small round object several hundred feel with a wooden stick, so that it goes over a wall, is glorified, and individuals who are capable of doing so on a somewhat routine basis (once or twice a week) are rewarded with multi-million dollar contracts. However, the ability to publish a compelling journal article that significantly advances scientific knowledge in a particular area tends to leave the author in relative obscurity outside the boundaries of his or her discipline, and possibly ridiculed by society for living in an "ivory tower" of academia. As a result, individuals are motivated to reinforce their cultural worldview by seeking out others who share their belief systems. According to TMT the sharing of worldviews is an essential component of management of death-based anxiety because it allows for the transmission of cultural values to the individual. These prescribed standards of value can then be met allowing the individual to have enhanced social worth. The recognition bestowed by worldview supporters to an individual who has achieved or surpassed the prescribed cultural standards reinforces the perception for the individual that he or she is part of something meaningful, permanent, and enduring, in turn assuaging anxiety associated with concerns about death and meaninglessness.

Worldview Threats

Unfortunately, because cultural worldviews are fragile social constructions, it is inevitable that individuals interact with others who possess different perspectives. According to TMT, the existence of other worldviews is threatening, because others may behave in ways that lead them to espouse beliefs that undermine our conceptions of meaningful behavior. As a result, the security we derive for meeting and surpassing those standards of value is shattered and faith in one's belief system can no longer serve as an effective anxiety buffer. Consequently, individuals are highly motivated to defend their belief system.

Worldview defense can be accomplished through a number of mechanisms. Approaches to worldview defense can be relatively pro-social in nature. In that vein, an individual may try to *accommodate* threatening worldviews by changing their worldview slightly to incorporate elements of the threatening perspective.

For example, for many years environmentalists were ridiculed as being "tree huggers." However, many companies have recently begun advertising campaigns informing the public of their efforts to be "green." Second, individuals may try to *assimilate* opposing worldviews into their own. For example, missionaries try to convince others to abandon their religious belief system in favor of the identity and principles specific to those of the missionary. Other worldview defense mechanisms are more destructive in nature. When faced with a threatening other, an individual can derogate the target though insults, slurs, or other verbal taunts. Although hate speech is generally protected by United States Constitutional First Amendment guarantees, derogation of this nature could be classified as a hate crime if it was expressed in conjunction with other types of crime (e.g., spray painting racial slurs or swastikas on property), or when it is perceived as being a true threat that intimidates and places an individual "in fear of bodily harm or death" (*Virginia v. Black* 2003, p. 1548), rather than as a statement of group solidarity (Wiener and Richter 2008). Finally, the most extreme form of worldview defense is *annihilation* of the worldview threatening other, where attempts are made to destroy the threat. From a theoretical perspective, violent hate crimes would fall under this category.

TMT Research

To date over 350 published studies have provided support for TMT and demonstrated that "mortality salience" (MS) creates a need for individuals to invest in and defend their cultural worldviews across a broad spectrum of behaviors. For example, MS has been shown to produce greater distress when behaving in ways that violate cultural values (Greenberg et al. 1995), increased liking for Americans among American participants (Greenberg et al. 1990), increased stereotypic thinking (Schimel et al. 1999), increased hostility toward those who pose a threat to the social values and morals of one's worldview (Rosenblatt et al. 1989); and increased aggression against a target who criticized participants' political views (McGregor et al. 1998). Of particular relevance to the topic of hate crimes, are the numerous TMT studies demonstrating MS leads to derogation of outgroups. These effects have been obtained in at least 17 different countries (Motyl et al. 2008). For example, MS led Japanese participants to be more negative in their evaluations of a target who criticized Japan (Heine et al. 2002). In addition, following MS, German participants were more negative in their evaluations of, and sought greater physical distance from, Turkish confederates (Ochsmann and Mathay 1994, as cited in Motyl et al. 2008). Further, in both Israel and the United States, MS has led participants to more negatively evaluate immigrants (Florian and Mikulincer 1997; Motyl et al. 2008). Various control conditions such as experiencing failure, social isolation, pain, paralysis, uncertainty and meaninglessness have not produced the same effects as MS manipulations.

TMT has also been shown to be relevant to a variety of legal issues including judgments towards criminal offenders, fair process concerns, and compliance with

judicial admonitions (Arndt et al. 2005). In one of the first series of TMT studies, Rosenblatt et al. (1989, Study 1) examined the influence of MS on municipal court judges' bail decisions for alleged prostitutes, in order to explore whether awareness of mortality would lead people to engage in worldview defense, and thus react more negatively to those who threatened their beliefs. As judges are trained to be objective administers of the law they potentially provided a highly stringent test of TMT. Ideally, judges should be immune to biases introduced through activation of their worldviews.

Rosenblatt et al. (1989, Study 1) provided judges with a packet of materials described as part of a study on personality and attitudes on bond decisions. Embedded within a packet of personality questionnaires were questions that asked the judges to describe thoughts associated with their own death (e.g., what would happen to them as they physically died and once they were physically dead). These questions designed to induce MS in judges were omitted for half the sample (members of the control condition). The judges were then presented with material that would typically be available to them when making bond determinations (e.g., the suspect had a prior arrest, unverified community ties, and no prior failures to appear at other trials). Finally, judges set bond amounts for the prostitute. Judges in the MS condition set an average bond of $450 dollars. However, control condition judges set significantly lower bonds, at an average of only $50. From the perspective of TMT, this effect presumably occurred because awareness of death leads people to reaffirm or bolster their conceptions of meaning that include prescriptions of acceptable and unacceptable behaviors. Not surprisingly, belief in legal statutes appears to be an important cultural worldview component for judges. Thus, they were more punitive to those who threatened that aspect of their beliefs. In a follow up study, Rosenblatt et al. (1989, Study 2) replicated the basic findings obtained with the judges, using college students who held negative beliefs about prostitution as participants. However, the effects did not occur among participants with pro-prostitution attitudes.

TMT and Hate Crimes

Thus, on the basis of a considerable amount of TMT research, it is clear that upholding cultural values is important to individuals after their mortality has been made salient to them. Further, concerns over justice and fair process appear to be magnified under MS. Consequently, we would expect (and have seen in the past) mortality salient individuals to be more punitive towards a variety of moral transgressors including lawbreakers. TMT would appear to be particularly relevant to the topic of hate crimes as these offenses involve the combination of prejudicial attitudes and criminal behavior. However, the relationship between MS and *reactions* to hate crimes is potentially a complex one. On a general level, based on past TMT psycho-legal research, individuals could be expected to be more punitive toward those who violate moral standards including those who break laws, such as

hate crime offenders. However, the victim in hate crime offenses is unique from victims of other offenses, in so far as the person was not victimized because of any preexisting relationship to the offender, or because the victim possessed something that the offender desired (money, property, sexual opportunity, etc.). Rather, a hate crime victim is attacked because they share certain characteristics with other members of a particular group that the offender holds negative attitudes towards. Those characteristics may represent a worldview threat not only to the attacker, but also to others who would view the hate crime victim as an outgroup member. For example, a homosexual victim may be viewed as a worldview threat to a heterosexual observer, or a Jewish victim may be perceived as a worldview threat to Christian observers. Consequently, it is not clear as to whether observers would respond to a hate crime offender in a more punitive manner, or rather deliver more lenient treatment, when the attacker had victimized a person who represented a worldview threat to the observer.

Lieberman et al. (2001) conducted a number of studies exploring hate crimes from a TMT perspective. They predicted that when hate crimes were presented in a relatively abstract manner, where the topic of hate crimes was discussed, but there was no mention of a specific victim, MS individuals would be more supportive of hate crime legislation, and more punitive towards hate crime offenders. However, when the victim of a hate crime attack was clearly identified, and that victim represented a specific worldview threat to observers, Lieberman et al. predicted that MS would attenuate punitive reactions towards hate crime offenders.

To test these predictions, Lieberman et al. (2001) conducted an initial study to determine whether reminders of mortality would lead participants to respond more negatively to hate crimes when the topic was discussed in general terms. Following the typical procedure for manipulating MS, participants were given a packet of personality questionnaires, in which the MS manipulation was imbedded. The MS manipulation was described as a "projective attitudes questionnaire," that asked participants to complete two open-ended questions: "Please briefly describe the emotions that the thought of your own death arouses in you" and "Jot down, as specifically as you can, what you think will happen to you as you physically die, and once you are physically dead." In a control condition, participants responded to parallel questions about experiencing dental pain.

Participants were then given a questionnaire measuring their attitudes towards hate crimes. Hate crimes were described to participants as "offenses motivated by hatred against a victim based on his or her race, religion, sexual orientation, ethnicity, or national origin." Participants were then told that there was a debate regarding the merits of hate crime legislation, and informed of two disparate viewpoints on the topic. The first viewpoint supported hate crime legislation, and argued that such legislation is necessary because it is not only a victim that is targeted in a bias motivated attack, but the entire portion of a community who are part of the victim's group. Thus, greater punishment is merited with such crimes. Alternatively, the second viewpoint argued the hate crime legislation is unfair, because it violates the concept of equal protection under the law. Equal protection is an issue because if an individual in a non-bias motivated attack sustained the same type or level of

injuries as a hate crime victim, their attacker would be punished less, despite the comparable injuries that they suffered. Consequently, their injuries are relatively devalued by the legal system. Participants then indicated their support for each viewpoint, and recommended punishments that they felt were appropriate for convicted hate crime offenders. The results indicated that MS participants were more supportive of hate crime legislation and more punitive toward hate crime offenders, replicating previous research (e.g., Rosenblatt et al. 1989) examining the relationship between MS and reactions to law breakers.

In a second study, Lieberman et al. (2001, Study 2) examined whether this trend would also be exhibited under conditions where a specific victim who represented a worldview threat to perceivers was identified, or whether the trend might be reversed, leading MS individuals to be more lenient to hate crime offenders. To investigate this, participants were asked a series of demographic and attitudinal questions so that heterosexual non-Jewish participants could be identified and selected for analysis. Participants were made MS or not in a manner similar to Study 1, and given a crime vignette to read. The content of the vignettes were adapted from Craig and Waldo (1996), and manipulated the content so that the crimes reflected either generic (non-descript) or biased motivations. The vignettes described a person who was assaulted by two men after leaving a rally. In the control condition, no motivation was given for the attack. Two separate hate crime conditions were also presented to participants. In those conditions, participants were informed that the victim had attended either a "Jewish Pride" or a "Gay Pride" rally, and that the attackers had delivered "anti-Semitic" or "anti-Gay" insults during the attack. In a manner similar to that of Rosenblatt et al. (1989), participants were then asked to recommend a bail amount for the offender. Control participants were more punitive toward offenders when the vignettes depicted a bias motivated crime compared to a crime where the motivations were unclear. However, this effect was attenuated in the MS condition. An additional analysis indicated that MS participants in the anti-Semitic and anti-Gay conditions recommended significantly lower bail amounts than their control counterparts in the anti-Semitic and anti-Gay conditions. Consequently, MS served to eliminate the punitive reactions towards hate crime offenders demonstrated by control participants, and ultimately led participants to be significantly less punitive toward such offenders.

Thus, the findings of Lieberman et al. (2001) demonstrate that the effects of MS on reactions to hate crime offenders are dependent upon how information about hate crimes is presented. Responses are the product of a combination between perceptions of offender motivation, and elements of an individual's cultural worldview. MS produces increased negative reactions towards bias-motivated attacks when hate crimes are discussed in general terms (with no specific victim identified). In such situations where an abstract threat is presented, participants' general negative attitudes towards law-breakers (who presumably represent worldview threats as they reject laws, which provide society with structure and order) are intensified. Consequently, participants become more supportive of hate crime legislation. However, when the victim of an attack represents a specific worldview threat to perceivers, hate crime offenders are treated more leniently. In the case of a specific

threat, other aspects of participants' worldview and self-identity may be activated. Worldview identity as a Christian or heterosexual may be quite powerful and override other worldview components that produced intolerance of offenders when hate crimes were described at the more abstract policy level in the first study.

Reactions to White Supremacists

In a similar study on reactions to white supremacists, Greenberg et al. (2001) obtained results that paralleled those of Lieberman et al. (2001). Greenberg et al. found that in an initial study without an MS manipulation, white American college students were generally hesitant to express direct support for racist beliefs espoused by a white supremacist (and in fact, individuals perceived a racially proud white person to be more racist than a black person expressing racial pride). These findings are not surprising given the social stigma that now exists for appearing racist in the United States (e.g., the public vilification that the comedian Michael Richards received in 2006 for using a racial slur while responding to an African–American heckler during a stand-up act). However, in a second study Greenberg et al. presented participants with an article that expressed racial pride, attributed to either a black or white author, following an MS manipulation. MS participants tended to perceive the racially proud white author as being less racist than the black author expressing similar sentiments. Greenberg et al. attributed this finding to MS enhancing ingroup identification, leading individuals to be less condemnatory towards an individual that expressed beliefs promoting their ingroup. These findings can be viewed as complementing those of Lieberman et al. (2001). In both studies, individuals initially responded negatively towards those who espoused or acted upon behaviors that displayed intolerance towards outgroup members, in the absence of MS (Greenberg et al.), or when hate crimes were discussed at a policy level without a specific worldview threat identified (Lieberman et al.). Further, Greenberg et al. found that MS led to more tempered reactions towards individuals that espoused white supremacist beliefs. Those beliefs may provide the foundation for motivations behind many hate crime attacks, which Lieberman et al. demonstrated were viewed as worthy of less severe sanctions following the induction of MS.

Taken together the findings of Lieberman et al. (2001) and Greenberg et al. (2001) are disturbing. These studies indicate that MS leads to greater tolerance of the beliefs of white supremacists and towards specific instances of hate crimes. However, any enhanced support for hate crime offenders that may be produced by MS is a cognitive product, and to some extent is relatively harmless if it is internalized, and not publicly expressed or acted upon. Indeed, these studies have focused on perceptions of behavior, rather than actual behavior itself. Yet, other research in the area of TMT has produced evidence that individuals may indeed behave in ways that are physically aggressive towards worldview threatening others. Presumably, if MS predisposed participants to be more tolerant of hate crime offenders, and more

likely to be physically aggressive to worldview threatening others, then it may be that MS leads individuals to be more likely to commit bias motivated crimes as well.

MS and Aggression

As noted above, McGregor et al. (1998) found that MS increased aggression towards targets who expressed worldview threatening sentiments. In that study, participants were exposed to essays purportedly written by a target who either sharply criticized or supported participants' political leanings (i.e., being either liberal or conservative). After evaluating the quality of the essay, participants were informed that they would participate in an unrelated study on personality and taste preferences, where they would taste a variety of food samples. They were asked to assist the experimenter and allocate a sample of painfully spicy hot sauce to a fellow participant whom they were told was the author of the essay they read (participants were also informed that the target had a strong dislike of spicy foods in a subtle manner).

Control participants did not differ in their allocations to targets who had supported or condemned their political beliefs, however mortality salient participants allocated significantly more hot sauce to the worldview threatening target, and in some cases allocated an amount that would have caused significant gastro-intestinal pain to the target if it was actually consumed. It should be noted that no allocated samples were actually consumed by any participants. However, all participants tasted a sample of hot sauce before allocating it to the targets. Consequently, they were quite aware of its intensity, and potential for harm if consumed in large quantities. McGregor et al. (1998) noted that although hot sauce is not the most common instrument for aggression, it has been used in cases of child abuse, animal abuse, and even attacks on unsuspecting police officers. Thus, there is reason to believe that damaging behavioral responses could accompany the increased leniency toward hate crime offenders exhibited as a function of MS.

Using Reminders of Historical Oppression to Increase Intolerance Towards Hate Crime Offenders

After the initial work by Lieberman and Arndt indicated that TMT could be useful in understanding motivations behind bias motivated attacks, subsequent work in this area focused on attenuating the lenient reactions to hate crime offenders exhibited under MS conditions. Lieberman and Arndt (2003) examined whether reminding participants that hate crime victims were members of groups that had been long oppressed would affect perceptions of hate crime attacks. Lieberman and Arndt speculated that providing knowledge of previous oppression could reduce a need for worldview defense because participants might feel that sufficient worldview defense had already occurred via the hands of others. That is, perhaps reminding

Christians of the Holocaust might lead them to believe that Jews have suffered sufficiently in the past, and reduce tolerance to new attacks, because worldview superiority has already been vicariously demonstrated. However, it is also possible that reminders of historical oppression might bolster one's faith in the superiority of one's worldview, making individuals more likely to continue to support the derogation or annihilation of those outgroup members who had been previously oppressed, when mortality was salient to individuals.

To investigate these issues, Lieberman and Arndt (2003) employed the same paradigm as used in the earlier research on the topic (Lieberman et al. 2001, Study 2). Participants were again made MS or not and given a vignette where a physical attack was described and the motivation of the offender was varied (ambiguous or anti-Semitic). Participants were informed that the victim was attacked after leaving a rally where a speaker discussed either the long history of violence in the United States (violence awareness condition), or (in an oppression awareness condition) the history of violence against Jews (e.g., the fact many Jews were killed in the Holocaust and that Jews are frequent victims of hate crimes).

The general results of previous research were replicated with MS participants responding less punitively toward hate crime offenders than control participants. Although there was a trend for control participants to be more punitive to hate crime offenders after hearing information about historical Jewish oppression, MS participants were not affected by such information. Consequently, it does not appear that simply presenting individuals with reminders of the suffering of others is sufficient to interfere with worldview defensive reactions. However, it may be possible to capitalize on other important components of one's worldview to increase tolerance of worldview threats.

Using MS to Increase Tolerance Toward Outgroups

Recently Tom Pyszczynski and his colleagues have conducted a number of intriguing studies on the effects of priming aspects of individuals' worldviews associated with compassion and tolerance in conjunction with MS. The work in this area has been guided by a recognition that specific personality characteristics and situational factors tend to exacerbate hostility toward outgroup members under conditions of MS. More specifically, religious teachings often serve as a justification for violent behavior, perhaps because threats to religious based beliefs and values are particularly threatening due to the deep rooted cultural association of such beliefs, and the fact that religious avenues afford clear routes to immortality (i.e., belief in heaven or reincarnation). In this vein, Bushman et al. (2007) found that aggressive behavior was increased when participants were presented with Biblical passages that approved violent behavior, particularly among those who believed in God or the Bible. Although religious beliefs have provided justification for individuals to engage in horrific acts of cruelty throughout history (e.g., holy wars, hate crimes, terrorism, etc.), components of religious worldviews may also provide a mechanism

for preventing such cruelty, particularly religious passages that promote compassion towards others.

Rothschild et al. (2009) explored the effects of priming religious-based compassion using samples in the United States and Iran. In an initial study, Christian participants who were classified as being either high or low in terms of religious fundamentalist beliefs were presented with statements that either promoted compassion through reference to Biblical passages (e.g., "Be kind and compassionate to one another, forgiving each other, just as Christ forgave you" Ephesians 4:32), or from non-Biblical statements (e.g., "One of the most important principles is loving other people"). Other participants were given neutral statements with regard to inter-group relations drawn from Biblical (e.g., "Lazy hands make a man poor, but diligent hands bring wealth" – Proverb 10:4), or non-Biblical sources (e.g., "A single conversation across the table with a wise man is worth a month's study of books." – Chinese Proverb). Although high fundamentalism was associated with a desire use greater military force to defend American interests (e.g., using chemical and nuclear weapons), the induction of MS led fundamentalists to decrease their level of support for such actions to a level that matched that of low fundamentalists when they were presented with compassionate Biblical passages. However, there was not a reduction in support for military force following neutral Biblical, compassionate non-Biblical, or neutral non-Biblical statements. Rothschild et al. replicated these results using a sample of Shiite Muslims in Iran (although this sample was universally high in religious fundamentalism) who responded to a measure of hostility against the United States and its allies following the presentation of compassionate passages from the Koran. These basic findings are congruent with earlier work by Greenberg et al. (1992a) who found that the effect of MS on derogation of dissimilar others was eliminated among participants who affirmed their belief in the value of tolerance.

An alternative method of attenuating support for anti-social behavior against outgroup members stemming from mortality related concerns is to recast how individuals perceive the categorical boundaries between themselves and others (Motyl et al. 2009). The foundations for this potential remedy are based on the seminal work of Allport (1954) who argued that prejudice could be reduced if members of different groups realized that they shared common goals. More recent social psychological research has found that prejudice and aggressive behavior can be reduced through recategorization of one's identity, so that individuals come to view one another as members of broader groups with more inclusively oriented boundaries, or through an emphasis on notions of common humanity (Gaertner and Dovidio 2000; Tajfel 1981).

Motyl et al. (2009) pursued the approach of reinforcing a sense of common humanity by drawing participants' attention to familial connections, in an attempt to capitalize on the near-universal nature of the family experience and the typically positive feelings most people associate with their families. An initial study was conducted that focused on measuring American's implicit attitudes toward Arabs. Implicit attitudes were measured by asking participants to categorize Arab and White American pictures along with positive and negative words, by pressing specific keys on a personal computer. The dependent variable was the difference in response times when *Arabs* and *negative words* were paired together, compared to

the pairing of *Arabs* and *positive words* (see http://www.yale.edu/implicit for a demonstration of the Implicit Attitudes Test procedure). Participants were made either MS or not, and then presented with pictures of either white American families, families from diverse ethnic groups around the world, or photographs of individuals who appeared unrelated to each other (e.g., non-interacting individuals waiting for a bus). MS increased anti-Arab prejudice (as measured on the IAT) among participants who viewed either the American families, or the pictures of the unrelated groups. However, anti-Arab prejudice was reduced among participants who viewed pictures of families from diverse cultures. Presumably, exposure to diverse families reminds participants of shared cultural values that go beyond traditional boundaries used to demarcate oneself.

Motyl et al. (2009) replicated these general findings in a follow up study where photographs were replaced by written accounts of childhood memories attributed to either foreigners or fellow Americans. The childhood memories focused on events that participants likely also engaged in as children (e.g., a trip to the beach). Participants were subsequently required to describe a similar memory, thus forcing them to draw connections between themselves and others who would normally be automatically classified as outgroup members (e.g., individuals from countries such as Bangladesh, India, and Mexico). The results indicated that MS increased negative attitudes toward immigrants among participants who read memories attributed to an American author. However, this trend was eliminated when participants contemplated the childhood memories of foreigners.

Thus, there is some empirical support for a number of approaches designed to reduce prejudicial attitudes by capitalizing on specific elements of cultural worldviews and focusing attention on tolerance and a sense of common humanity. These approaches are particularly powerful following reminders of one's mortality, which creates a need to endorse and promote values that a person considers central to their identity. It may be possible to incorporate these approaches into programs designed to prevent hate crimes, or as an intervention program for hate crime offenders. In the former case, educational programs (perhaps delivered in schools) designed to enhance connections between an individual and outgroup members based on themes of shared humanity may be far more effective than diversity awareness programs designed to simply make individuals aware of other groups or cultures. Similar approaches could be used for hate crime offenders in an attempt to reduce recidivism of bias motivated attacks. However, empirical research is clearly needed to determine whether such approaches could attenuate prejudicial attitudes that are powerful enough to have produced overt bias motivated crimes in the past.

Conclusions

Despite cultural shifts that have led to the election of an African–American for President of the United States, the frequency of hate crimes has remained relatively constant since the FBI began tracking such information nearly two decades ago.

In fact, as previously noted, there was an increase in racially motivated hate crimes immediately following the election, clearly indicating an undercurrent of intolerance remaining in the country. Bias motivated attacks can be traced back to the earliest days of American colonialism (Burrows and Wallace 1999; Streissguth 2003) and, of course, far earlier when world history is examined. The pervasiveness of such behavior may be attributed to basic psychological processes that underlie a desire to dominate outgroup members. This chapter has reviewed research that sheds light on those psychological processes and has focused on the unique contributions of TMT in better understanding hate crimes.

The studies reviewed in this chapter indicate that the relationship between TMT and hate crimes is intricate. Although mortality related concerns may create a need to maintain self-esteem leading one to be predisposed to demonstrate his or her superiority over worldview threatening others, MS will not always promote the commission of hate crimes. Rather, MS creates a need to invest in and defend cultural worldviews. Cultural worldviews are elaborate creations that guide a wide variety of behavior. As a result, aspects of cultural worldviews associated with notions of justice and fairness may lead individuals to generally support greater punishment for hate crime offenders, unless the offender has done the dirty work of defending other elements of an individual's worldview, by committing an attack on a specific worldview threat.

Although TMT is unique in so far as it focuses on responses to mortality related concerns as specific underlying psychological processes that foster prejudicial attitudes and ultimately bias motivated attacks, it should be viewed as a theory that complements, rather than competes with, other theoretical explanations for prejudice. For example, it is impossible to consider the effects that MS will have in a given context, without considering individual differences. Factors such as authoritarianism, endorsement of religious fundamentalist beliefs, attachment style, depression, and self-esteem have all been found to moderate terror management processes (e.g., Greenberg et al. 1993; Mikulincer and Florian 2000; Motyl et al. 2009). Interpersonal factors focusing on the transmission of normative influences to the individual are highly relevant to the development of cultural worldviews that dictate standards of value for an individual and provide the basis for justifications of behavior. In addition, factors that define the nature and frequency of intergroup interaction may dictate whether worldview defense is performed in a relatively prosocial manner (e.g., through the process of accommodation where elements of a threatening worldview are adopted) or in destructive manners such as by derogation or annihilation. Finally, it is important to consider the influence of other psychological processes, such as cognitive categorization, that foster ingroup/outgroup distinction, and how such boundaries can be recategorized, perhaps through an emphasis on common humanity.

Insight into the motivations and circumstances surrounding the commission of hate crimes can best be understood through the combination of multiple theoretical perspectives that focus on different levels of analysis. TMT provides not only an important part of that understanding, but also potential solutions. The research described in this chapter indicates that simply making others aware of historical

oppression that victimized groups have faced may not be sufficient to undermine worldview defensive based bias-motivated attacks. However, the promotion of tolerance and conceptions of common humanity may be effective mechanisms at reducing the likelihood of such attacks. This approach might be particularly useful for attacks motivated by a desire for thrill seeking (McDevitt et al. 2002). Increased worldview based reminders of tolerance might motivate individuals to redirect their attention away from potential hate crime targets and towards less destructive avenues in order to satiate a spontaneous need for entertainment. Hopefully, future work in this area will specifically address this potential remedy and identify other ways of capitalizing on MS related processes to reduce intolerance.

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Chapter 6
Truth in Emotional Memories

Cara Laney and Elizabeth F. Loftus

…while the future's there for anyone to change,
still you know it seems
It would be easier sometimes to change the past...[1]

So said Jackson Browne in his 1974 track "Fountain of Sorrow." The album containing this track stayed for 29 weeks on the Billboard Top Pop Album Chart. While we know rather little about changing the future, we do know quite a bit about how to change the past. Since witnesses in legal proceedings are routinely asked to recall the past, it is crucial to understand how accurate these recollections are, how prone to distortion they might be. Moreover, witnesses in legal proceedings are often asked to recall a past event that was quite emotional in nature. Thus it is crucial to also understand the nature of emotional memories. Fortunately, we have made considerable progress in this endeavor, and some of that progress is described in this chapter.

People's autobiographical memories can be altered with suggested details (see Ayers and Reder 1998, for review). But entirely *false* memories can also be planted in people's minds. These entirely false memories have sometimes been called "rich false memories," and refer to subjective experiences "about which a person can feel confident, provide details, even express emotion about an event that never happened" (Loftus and Bernstein 2005, p. 103). In other words, rich false memories can have many of the same qualities as true memories.

In early studies of rich false memories, adult research subjects were led to believe that they had had a variety of childhood experiences, from being lost in a shopping mall (Loftus and Pickrell 1995) to spilling a bowl of punch on the bride's parents at a wedding (Hyman et al. 1995). These early false memories were planted using suggestions about specific events that had supposedly come from the relatives of research subjects. The false events were presented in a context of true

C. Laney (✉)
University of Leicester, Leicester, UK
e-mail: cl136@leicester.ac.uk

[1] Thanks to Spero Lappas, Esq. for bringing these lyrics to our attention.

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events, and suggestions were repeated over multiple interviews. Rich false memories for even more implausible or impossible events have been planted using other suggestive procedures. For example, Mazzoni et al. (2001) planted false memories for witnessing demonic possession, and Braun et al. (2002) planted memories for meeting Bugs Bunny at Disneyland (an impossible event because Bugs is a Warner Brothers character).

To get a sense of the variety of suggestive procedures that have been used to plant false memories, consider a couple of additional examples. Wade et al. (2002) showed their subjects a doctored photograph in which a real childhood photo was digitally pasted into a hot air balloon scene. Exposure to the doctored photo led a substantial number of subjects to believe that they had been on a hot air balloon ride years earlier. Bernstein et al. (2005a, b) used a simple false feedback procedure and successfully led subjects to falsely believe that they had had specific childhood experiences with foods, such as getting sick after eating strawberry ice cream.

But what do these studies tell us about our own autobiographical memories, except that some of them may be false? And what about the case of a witness in court? Though we can acknowledge that his or her memory may be distorted or entirely false, this acknowledgment alone is rather unhelpful. It would be extremely useful if we could look at a particular memory – whether in court or in our own day-to-day lives – and determine with some certainty whether that memory was true or false. A variety of possible methods have been suggested to distinguish between these two memory types, and some of the relevant research is discussed here. In particular, we address research that asks whether true and false memories can be distinguished on the basis of any of a number of characteristics, from their repercussions to their emotionality.

Consequences of False Memories

One of the ways that true and false memories could be different from one another is in their consequentiality. That is, because true memories represent events that actually happened to people, it is plausible that these memories might be more meaningful for those people and thus have greater implications for their subsequent lives than would memories representing events that never actually happened. That is, true memories might have greater repercussions than false memories. The first step in testing this hypothesis is to discover whether false memories can have consequences or repercussions for those who develop them. This possibility has now been tested in several different laboratories.

The first studies of false memory repercussions sought to test whether memories for getting sick after eating specific foods (dill pickles, hard-boiled eggs, strawberry ice cream, and chocolate chip cookies) might make people more likely to avoid those foods in the future (Bernstein et al. 2005a, b). These studies used a false feedback manipulation to convince subjects that they had gotten sick after eating the critical food items as children.

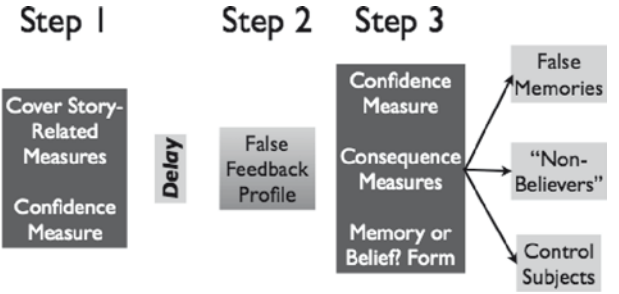

Fig. 6.1 False feedback study schematic

This false feedback manipulation, which has since been used in several additional studies, involves three steps (see Fig. 6.1). First, subjects come into the laboratory to complete a series of questionnaires on a particular topic, like eating habits. The most crucial questionnaire asks subjects how confident they are that each of a series of childhood food-related events happened to them, on a Likert-type confidence scale. Other questionnaires assess how recently subjects have eaten various foods, and various aspects of their personalities (to support the cover story that the study is about the relationship between food and personality).

The second step, after a delay ranging from minutes to days, is to give subjects a false feedback profile. Subjects are told that these profiles were created for them by a special computer system that had analyzed their data from the first set of questionnaires. Each profile has the subject's name at the top and tells him or her that he or she had several specific experiences as a child. For example, subjects in one early study were told that as young children, they had disliked spinach, enjoyed eating fried foods, gotten sick after eating dill pickles (or, for another group of subjects, hard-boiled eggs), and that eating chocolate birthday cake made them happy (Bernstein et al. 2005b). Three of these items (spinach, fried foods, and chocolate cake) were fillers, assumed to be true of most young children. The third item was the critical one, about which we expected some subjects to form false memories.

The third step in the process is to give subjects a second set of questionnaires. This happens within minutes after subjects have read and elaborated upon their profiles. The second set of questionnaires includes the same confidence measure that they completed pre-manipulation, as well as several measures designed to assess the consequences of any newly formed false memories. For example, in the pickle-egg study, subjects were asked to rate their preference for a series of foods, including pickles and hard-boiled eggs, as well as related foods like egg salad sandwiches and cucumbers. They were also asked how likely they were to eat various foods, including dill pickle spears and salted hard-boiled eggs, at an afternoon barbeque party. In other studies, we have asked subjects which foods they would be likely to order in a restaurant, and how much they would be willing to pay for various foods in a grocery store. One final questionnaire is of importance. The Memory or Belief Form asks subjects whether their experience of each of three different events, including the critical false event from the false feedback profile, is best

described as a detailed memory, a less specific belief, or whether they are positive that it did not happen.

The presence of false memories in subjects is established with two specific pieces of information (see Morris et al. 2006). First, did their confidence that the critical event had happened in their childhoods increase from pre- to post-manipulation? And second, did they report a "memory" or a "belief" on the Memory or Belief Form? Subjects who meet both of these criteria are said to have formed false memories or false beliefs, and are labeled as "believers." Those who receive the manipulation but do not meet both these criteria are labeled "non-believers." And of course those who do not receive the manipulation are controls. These criteria are necessarily somewhat arbitrary, and other investigators might want to modify them. We chose them to be moderately conservative.

In the studies that used this type of false feedback, substantial minorities of manipulated subjects (18–41%) did indeed come to believe that they had had these food-related childhood experiences. Importantly, these "believers" also tended to show a dislike for the relevant food items. In the pickle-egg study, "believers" reported reduced preference for their manipulated foods (eggs or pickles) and less willingness to eat the foods at the hypothetical barbeque, compared to both "non-believers" and controls.

More recent studies have looked for consequences of false memories for loving a particular food (asparagus) the first time it was tried, or for having other specific childhood experiences (Berkowitz et al. 2008; Laney et al. 2008c; Laney and Loftus 2008; Laney et al. 2008d). For example, Berkowitz et al. (2008) attempted to plant false memories for having one's ears licked in an uncomfortable way by the character Pluto on a childhood trip to Disneyland. The subjects who developed false memories about the uncomfortable licking experience claimed they wanted to pay less for a Pluto related souvenir than control subjects.

Laney et al. (2008a) assessed the lasting power of false beliefs and their consequences. They used the false feedback procedure to give substantial minorities of subjects (34–47%) false memories for either loving or hating asparagus the first time they tried it as children. "Believers" displayed a range of (self-reported) false memory consequences, including altered preference for asparagus and altered willingness to eat asparagus in a restaurant. After a 2-week delay, most "believers" (77–85%) retained their confidence in their false memories, and the consequentiality of the memories, though reduced from original levels, had not disappeared.

Laney et al. also specifically sought to compare true and false memories on the basis of their consequences. In particular, they compared two groups of subjects, both of which ended the study reasonably confident that they loved or hated asparagus the first time they tried it, but only one of which started the study that way.

The post-manipulation confidence (measured both immediately post-manipulation and 2 weeks post-manipulation) of those subjects with true memories of loving asparagus the first time they tried it was significantly higher than that of subjects with false memories for the same event (the latter group were labeled "Love Believers"). See Table 6.1 for all means and statistical comparisons. Likewise, the

Table 6.1 Comparisons of true and false memory confidence and consequences in Laney et al. (2008a)

	"Loved Asparagus" believers	"Loved Asparagus" true memories	*t*	"Hated Asparagus" believers	"Hated Asparagus" haters	*t*
	M (SD)	M (SD)		M (SD)	M (SD)	
Confidence, immediately post-manipulation	5.09 (1.44)	6.19 (0.75)	3.76**	5.70 (1.46)	6.70 (0.61)	4.52**
Confidence, 2 weeks post-manipulation	3.86 (1.82)	5.62 (1.12)	4.49**	4.48 (1.91)	5.62 (1.84)	2.46*
Consequences						
Preference for asparagus, immediately post-manipulation	6.11 (1.39)	7.29 (0.72)	4.15**	3.96 (2.60)	2.81 (2.66)	1.80
Preference for asparagus, 2 weeks post-manipulation	5.60 (2.02)	7.19 (0.87)	4.07**	3.85 (2.61)	2.85 (2.62)	1.56
Willingness to Eat in Restaurant, immediately post-manipulation	5.12 (1.57)	6.00 (1.41)	2.10*	3.52 (2.24)	2.92 (2.31)	1.08
Willingness to Eat in Restaurant, 2 weeks post-manipulation	4.86 (1.88)	5.76 (1.22)	2.18*	3.72 (2.30)	2.88 (2.37)	1.46
Good Feelings[a]	0.96 (0.49)	1.32 (0.46)	2.62*	0.41 (0.59)	0.27 (0.54)	0.97
Bad Feelings[b]	0.07 (0.22)	0.07 (0.24)	0.03	0.68 (0.72)	1.37 (0.86)	3.60**
Email ranking	5.10 (2.01)	6.86 (2.48)	2.51*	3.85 (2.64)	4.81 (2.61)	1.20

Notes. [a] index of ratings on three items: "delicious," "flavorful," and "comforting"
[b] index of ratings on two items: "unpleasant" and "disgusting"
*$p<0.05$; **$p<0.001$. "Believers" are those subjects who met our criteria to be labeled as having false memories. "True Lovers" and "True Haters" are those subjects who were confident in their critical event had happened, before any manipulation had occurred

post-manipulation confidence of subjects with true memories of *hating* asparagus the first time they tried it ("True Haters") was significantly higher than that of subjects with false memories ("Hate Believers").

In general, the consequences apparent in Love Believers were less substantial than those shown by subjects with true memories of loving asparagus. Specifically, true memory subjects showed greater preference for asparagus (at both post-manipulation sessions) than Love Believers, greater willingness to eat asparagus in a restaurant (again, at both post-manipulation sessions) than Love Believers, greater levels of "good" feelings for asparagus than Love Believers, and a greater enthusiasm for actually eating asparagus in the lab than Love Believers.

Hate Believers and True Haters showed few differences on consequence measures (and these differences only reached significance on the "bad" feelings composite measure). But this similarity was more a function of the lack of consequences shown by True Haters than the significance of consequences shown by Hate Believers. That is, neither Hate Believers nor True Haters demonstrated significant consequences.

Other researchers have sought to demonstrate false memory consequences in measurable behavior rather than self-reported intentions expressed in paper and pencil tasks. Scoboria et al. (2008) falsely suggested to subjects that they had been exposed to contaminated peach yogurt as children and had become sick. A week after the false suggestion, subjects participated in a second phase of the study that they were led to believe was a second, unrelated study. In the second phase, subjects were asked to rate the taste of various flavors of yogurt and crackers. The manipulated subjects (Scoboria et al. did not separate their subjects into "believers" and "non-believers") reported less preference for peach yogurt specifically, and also ate less of three different flavors of yogurt than did control subjects. It was not simply that they ate less of everything because they also had the opportunity to eat crackers and did not eat fewer of them.

Geraerts et al. (2008) used the false feedback procedure mentioned above to give subjects false childhood memories for getting sick after eating egg salad. A substantial minority (41%) of subjects formed false beliefs or memories about egg salad induced illness. After a bogus debriefing, subjects were given the opportunity to eat egg salad sandwiches. Subjects exposed to the false feedback manipulation ate fewer egg salad sandwiches than did those not exposed to the manipulation (though there was not a significant difference in eating behavior between "believers" and "non-believers"). Geraerts et al. also brought subjects back four months later for an allegedly separate study of eating behavior. On this occasion, "believers" ate significantly fewer egg salad sandwiches (but not other types of sandwiches) than either "non-believers" or controls.

In summary, across a series of studies in three different laboratories, undergraduate subjects have been shown to demonstrate consequential false memories. These false memories of food related childhood events have proved to lead to changes in subjects' feelings about the specific foods and other closely related foods, including how much they value those foods. Food related false memories have also been shown to have genuine behavioral consequences including reduced willingness to eat the relevant foods. And these false memories and consequences have also been shown to persist over time.

Explicitly Comparing True and False Memories

Studies of false memory consequences were far from the first studies to compare true and false memories in the hopes of finding a way to distinguish between the two categories after the fact. These studies fall under four primary headings.

The first type of studies uses subjects' own ratings of their memories to attempt to differentiate between true and false memories. In the second type of studies, sets of mixed true and false memories are given to other individuals to judge, just as outside judges attempt to differentiate between truths and lies in studies of deception detection (see Vrij 2008). In the third and fourth types of studies, memories are compared objectively. These objective studies have two different foci: brain activity underlying memory processes, and linguistic differences in the resulting memories. We address all four types in turn. But first we address the critical issue of defining "true" and "false" memories in a research context.

Defining "true" and "false" memories. Before we can realistically compare true and false memories on any useful dimension, we must be sure that we actually have two separate sets of memories, one true, the other false. This process must be carefully undertaken. After all, if this distinction were obvious – that is, if it were easy to tell true memories from false ones after the fact – then we would not need the research to find a way of discriminating true from false. Rather, in most cases we have no access to the original events that subjects are remembering (for exceptions to this rule, see Goff and Roediger 1998; Seamon et al. 2006; Thomas and Loftus 2002, where false memories were created about recent events and the researchers knew the truth about what had happened). So we need to define specific criteria that can reliably differentiate between the two types of memories for research purposes, long after the underlying events. To do this, we use the information that we do have. In "lost in the mall" studies, the researchers gather information from the family informants about what happened in the subjects' childhoods. They collect "true" events from family members and then invent a false event and verify with the family that it is indeed false. In our false feedback studies, we have data about subjects' confidence that they experienced the critical event from two different points in time (at least) – one before and one after the manipulation. We also have subjects' subjective reports of their own memories, in which they label them as detailed memories, less specific beliefs, or neither.

As discussed above, in our false feedback studies, subjects are deemed to have false memories when they become more confident that the critical false event happened from pre- to post-manipulation, and they report a "memory" or "belief" for the event at the end of the study. In more recent studies, we have also required that these subjects have pre-manipulation confidence that falls below the midpoint of the confidence scale. We added this requirement to ensure that we were not mislabeling subjects as having false memories when they were reasonably confident that they had experienced the event *before* the manipulation and simply became more confident after the fact (see Morris et al. 2006). That is, we wanted to avoid labeling individuals with ostensibly *true* memories as having *false* memories.

Our definition of "true" memories is rather similar to our definition of false memory "believers," because both groups believe that they experienced the critical event. Specifically, we label memories as "true" if subjects are confident (above the midpoint on the confidence scale) that they experienced their critical event, both *before* and *after* the manipulation, and report a "memory" or "belief" at the end of the study (Morris et al. 2006). Thus far, we treated these "true" memories in two

different ways. For studies where we have been interested exclusively in false memories and their consequences, we have simply excluded subjects with true memories (e.g., Laney et al. 2008d). For other studies, we have explicitly sought to compare true and false memories (Kaasa et al. 2008; Laney et al. 2008a; Laney and Loftus 2008).

Rememberers' ratings. Research subjects have been asked to rate their own memories on a wide variety of characteristics. These ratings can then be compared for known (or suspected) true and false memories, or for other types of remembering experiences, like "remember" versus "know" judgments (Tulving 1985) or memories versus imagined events (e.g., Crawley and French 2005; French et al. 2006; Lampinen et al. 2003; Laney and Loftus 2008). One common method for making these ratings is to use the "Memory Characteristics Questionnaire" created by Johnson et al. (1988); see also the "Memory Experiences Questionnaire" by Sutin and Robins (2007). This questionnaire asks subjects specific questions about their specific memories, including, for example, "My memory for this event is (dim…sharp/clear)" and "The relative spatial arrangement of people in my memory for this event is (vague…clear/distinct)."

These studies tend to find that true memories and "remembered" events are somewhat more vivid than false memories and also more vivid than the case where subjects "know it happened" but lack a specific memory. Moreover, true memories (and "remembered" events) contain somewhat more sensory detail and emotional content (Crawley and French 2005; Laney and Loftus 2008). The specific issue of emotional content is discussed in detail below.

Other studies have used other methodologies for collecting subjects' ratings of their own memories. In the "lost in the mall" procedure, subjects are typically interviewed about their perceptions of their true and false memories a few weeks after they are planted (Heaps and Nash 2001; Loftus and Pickrell 1995; Porter et al. 1999). The false memories produced using this technique have tended to be held with less confidence and to contain less sensory detail than the comparison true memories in those studies.

Loftus and Pickrell (1995) gave their subjects four childhood events to remember. Three of these were true events, verified by relatives. The fourth was the false event about becoming lost in a shopping mall. These researchers found that the true memories were described using more words than the false memories, and were rated as less clear and less confidently held. During debriefing, Loftus and Pickrell asked their subjects to choose which of their four events was the false one. Almost 80% chose correctly.

Porter et al. (1999) compared subjects' ratings of three different types of memories – real, planted (false), and fabricated (intentionally deceptive) – for six different emotional childhood events, including an animal attack and a serious outdoor accident. True and false memories differed on several dimensions, including confidence, vividness, stress, and coherence. These researchers also asked their subjects which of their personal events, the true event or the false event, had not occurred. Some 90% of subjects guessed correctly. Unfortunately, in the applied setting of the courtroom, we cannot tell witnesses that one of the memories they are testifying

about is false and have them guess which one, thereby guaranteeing the accuracy of the remaining memories.

Outside judges. A second group of studies uses third-party judges to attempt to differentiate between true and false memories. In these studies, subjects are asked to play a role similar to jurors, in that they are using whatever cues are available to them in order to determine whether a particular person's statement has sufficient validity. Some authors claim that these decisions are made with ease (see Porter et al. 2001). Others argue that these decisions are difficult, and that accuracy is hard to come by (e.g., American Psychological Association 1996; Anastasi et al. 2000). Several relevant studies are discussed here.

Leichtman and Ceci (1995) used two different types of suggestions (one pre-manipulation, the other post-manipulation) to get their preschool-aged subjects to believe that a visitor to their classroom, Sam Stone, had ripped a book and soiled a teddy bear, when he had in fact done neither. Substantial proportions of the young subjects made memory errors in subsequent interviews about Same Stone's visit. Later, Leictman and Ceci gave videotapes of three subjects to 119 professional researchers and clinicians to see whether they could determine what had actually happened during Same Stone's visit to the children's classroom. These professionals were generally poor at making these discriminations, and in fact the child who was the most accurate in her report – stating that Sam Stone had done nothing interesting – was rated by the professionals as the least credible.

Schooler et al. (1988) videotaped subjects as they described objects they had seen in the past. Sometimes they were describing true details and other times they were describing false details that had been planted in their memory. Judges who watched the videos were not particularly adept at distinguishing between true and false memories. In fact overall they tended to believe that the memories were real, whether they were or not. And their tendency to believe in the truth of the memories was stronger when they saw and heard the account, compared to simply reading it.

Qin and Goodman (2000), as cited in Campbell and Porter (2002) gave adults videotapes of true and experimentally induced false memory reports and asked them to distinguish between the two types. Overall accuracy rates were 64% for true memories and 59% for false memories, with memory clarity and plausibility significantly predicting credibility judgments.

Campbell and Porter (2002) showed videos of six subjects from a previous false memory study (Porter et al. 1999) each freely describing one true and one false memory to a set of new subjects. The new subjects were asked to determine whether each memory was true or false and to answer questions about what cues (e.g., verbal hedges, vividness) they had utilized in making this determination. The results showed that subjects were correct in 60% of their false memory judgments, and 53% of their true memory judgments.

In our own lab, we have given subject-judges the detailed responses of other subjects who had previously reported true and false memories in one of our false memory studies (Laney et al. 2008b) or shown the subject-judges short videos of individuals describing their true, false, or fabricated (intentionally inaccurate)

memories (Kaasa et al. 2007). These bits of text and video were randomized with respect to type (true, false, fabricated), and after being given some specific direction about the three available labels, subject-judges were asked to classify the memories accordingly. In both studies, most subject-judges demonstrated a strong bias toward labeling memories as "true," regardless of their actual status. As in the Schooler et al. (1988) study mentioned earlier, judges tend to think the false memories are true. These are the kinds of judgments that jurors are asked to make, and it is worrying that people seem to be rather poor at making them.

Brain Activity

Recently, some researchers have begun using neuroimaging and related techniques to try to distinguish true and false memories (Cabeza et al. 2001; Okado and Stark 2005; see Schacter and Slotnick 2004, for review). These studies have often found differences between groups of accurate and groups of inaccurate memories though differences vary greatly between studies. It should be kept in mind that most of these studies examined distorted memories rather than ones that were wholly false.

Cabeza et al. (2001) studied recognition memory in a functional magnetic resonance imager (fMRI) and found different levels of activation in a region of the medial temporal lobe for true versus false recognition. Huron et al. (2001) found that benzodiazepines, which are known to impair (true) memory, did not hinder false recollection.

Okado and Stark (2005) had subjects watch two series of short vignettes while their brain activity was monitored by an fMRI. The second series was a modified version of the first, and served as a form of misinformation. After a 2-day delay, the subjects' memories for the original vignettes were tested. The researchers then compared the brain activity (recorded during memory encoding) that had subsequently produced accurate versus inaccurate memories. Results suggested that true and false memories were the result of different levels of processing of the original vignettes and misinformation vignettes by specific regions of the medial temporal lobe and prefrontal cortex.

These differences appear to demonstrate objective, meaningful differences between correct and incorrect memories, which might be used to distinguish between the two types. They are not, however, practical differences. The memories that people describe on the witness stand are not memories that were formed inside an fMRI machine, nor can they reasonably be recalled in this strictly controlled setting. Therefore, we cannot assess witnesses' brain activity as a means of determining whether their memories are true or false.

Linguistic differences. Other researchers have studied a different, somewhat more practical, way to distinguish between memories objectively – by analyzing linguistic differences that occur when people are reporting true and false memories (Loftus and Pickrell 1995; Pezdek et al. 1997; Morris 2007; Schooler et al. 1988; Schooler et al.

1986). These analyses have led different authors to dramatically different conclusions, however. Some authors have found that false memories have contained more verbal hedges and references to cognitive processes (Schooler et al. 1986, 1988). Schooler et al. (1986) also found that reported false memories are wordier than reported true memories, but this was not always found in subsequent studies (Loftus and Pickrell 1995; Pezdek et al. 1997; Schooler et al. 1988). So one probably needs to be careful in inferring truthfulness from the presence of linguistic markers.

The take home message from all of these studies comparing true and false memories is that there is no one method for reliably distinguishing between true and false memories, particularly after the fact. We next consider, in some detail, one additional study that should make this point clear.

A Sample Study

Morris (2007) conducted a thorough analysis of a variety of potential differences between true and false memories produced in a series of previous false memory consequences studies (see Laney et al. 2008d). Those studies used the false feedback procedure (described above) to implant false memories for loving or hating asparagus the first time it was tried in childhood. Morris compared a total of 40 false memories and 42 true memories.

Morris' study was motivated by many of the issues that have already been discussed here. In particular, she aimed to compare true and false memories for the same event in great detail and across several levels, in order to find characteristics that might distinguish between the two types of memories after the fact.

Morris used a particularly strict definition of "false" memories for her study (see Morris et al. 2006). To be labeled as having a false memory, a subject had to start the study reasonably confident that a childhood event involving the food asparagus had not happened to him or her. On an 8-point confidence scale where one meant definitely did not happen and eight meant definitely did happen, the subject had to have given the item a rating of 1–3. Moreover, the subject had to end the study reasonably confident that the event had happened (a rating of 6–8), and report a "memory" or "belief" on the Memory or Belief Form. To be labeled as having a true memory, a subject had to both start and end the study with high confidence (ratings of 6–8) and report a "memory" or "belief."

Morris compared these true and false memories on several different dimensions, including demographics of the subjects, confidence levels, memory consequences, proportions of "memory" and "belief" responses, type of detail included in memory reports, and linguistic characteristics. With respect to demographics, there were no differences between those who reported true versus false memories on any of the (albeit minimal) demographic details collected in the original studies (gender, age, time spent in the US). There were likewise no significant differences in post-manipulation confidence levels associated with the two types of memories, though this is in large part a function of the definitions used to define the two groups.

To assess possible differences in memory consequences, Morris first combined two highly correlated measures. These items measured a tendency to want to eat asparagus. The first was the item "sautéed asparagus spears" from the Restaurant Questionnaire, in which subjects were asked how likely they were to order each of 32 different foods on a restaurant menu. The second was the asparagus item from the Food Preferences Questionnaire, in which subjects were asked how much they liked each of 64 different food items. The two combined items formed a consequence index item. Because some subjects had memories (whether true or false) for *loving* asparagus the first time they tried it, while others had memories for *hating* it, these categories were analyzed separately. The results showed no differences in consequences between true and false love memories or true and false hate memories.

The remaining analyses in Morris' study used subjects' open-ended responses on the Memory or Belief Form. To complete this questionnaire, subjects needed to classify each of three events, including their critical (love or hate) asparagus event, as a specific, detailed "memory," a less specific "belief" that the event had happened, or neither (specifically, to say that they were "positive" the event had not happened to them). Then they were asked to support their response with evidence. Subjects in Morris' study used between six and 63 words to support their responses. Recall that "memory" or "belief" responses were necessary for subjects to be classed as having either a true or a false memory. Subjects with true and false memories were equally likely to label their subjective experiences as "memories" rather than "beliefs" (64% for true memories versus 60% for false memories). Subjects' responses were also given to a blind rater tasked with dividing memories according to whether they contained episodic details. Once again, there were no significant differences between true and false memories.

Morris next analyzed the linguistic characteristics of subjects' Memory or Belief Form responses. She compared the relative number of words, hedges, sensory details, references to cognitive processes, and first-person pronouns in true and false memory responses. She found that true memories were described with an average of 28 words (SD = 12.5), while false memories were described with an average of 29 words (SD = 12.9). There was also a complete lack of differences between the two memory types with respect to hedges, sensory details, and references to cognitive processes.

In fact, the only significant difference that Morris found between the true and false memories in her study was in the use of self-referent language. Specifically, she found that false memories included an average of 4.3 uses of the first person, while true memories contained an average of just 3.3 uses of the first person. The greater use of first person pronouns in the false memories is reminiscent of work by Newman et al. (2003); see also Vrij (2008), which showed that linguistic analysis could be used to differentiate between truthful and deceptive (deliberate lies) statements (though in that case, it was *true* memories that were associated with greater use of the first person). Morris also drew connections between this finding and those of Nigro and Neisser (1983), who found that more recent memories were more likely to be "field" memories (those employing a first person perspective)

while older memories were more likely to be "observer" memories (those employing a third person perspective). Because the false memories created in the study are necessarily more recent than the true memories that existed before the study, these results should allow us to hypothesize that true memories would be more likely to be observer memories, and false memories would be more likely to be field memories. This dovetails nicely with the findings of greater use of the first person in the false memories in Morris' study.

Nevertheless, even if these results might be promising for their potential value in discriminating true from false memories, they are not particularly practical for settings like the legal system. If a witness sits in the stand and uses the first person when describing his or her memory for a crime or other event, that does not mean that the memory is false. Even if he or she uses the first person repeatedly in every sentence, it does not make his or her memory unreliable. That is, although groups of true memories may well be distinguishable (in specific ways, in some studies), the differences are too small to be useful in classifying a single new memory.

The broader lack of differences between true and false memories in Morris' study is more telling. She failed to find both objective and subjective differences between true and false memories, even though the false memories had been created using a very simple false feedback procedure, and subjects had been given almost no time to develop or rehearse their false memories – two facts which should have maximized differences between true and false memories. In particular, Morris' study, like those that preceded it, failed to identify any factor or test that could be used to distinguish true from false memories.

Emotion and False Memory

Although it is interesting and scientifically meaningful to show that there can be consequences of a false memory of getting sick after eating pickles as a child, or that true memories of loving asparagus the first time one tries it tend to have more references to the self than do false asparagus-related memories, applying these findings to the legal world must be done cautiously. The kinds of memories that find their way into court settings often are extremely emotional and personally meaningful, unlike the typical false memories planted in research – memories for mundane things like liking asparagus or kissing a plastic frog (the exceptions to this rule are discussed below). Researchers had good reasons for using the more mundane false memories, including fewer ethical problems than trying to plant horrendous emotional memories, and the ability to create sufficient numbers of false memories necessary for addressing key research questions. But they still leave unresolved the question of whether false memories can be created for intensely emotional events, and if so, how these memories compare to true memories for the same events. Thus, there is still a need to study false memories for meaningful and emotional events.

There is no doubt that much of the testimony that is given in courtrooms describes witnesses' memories for particularly emotional events. But what assumptions

do jurors have about the relationship between emotionality and accuracy in that testimony? If jurors (and other triers of fact) ignore the emotions expressed by witnesses, or believe that emotion is unrelated to memory accuracy, then it would be less important for us to study the relationship between emotion and false memory. But if they believe that genuine emotional expression signals accurate memory, then we need to worry about whether it is possible to have false memories for emotional events, and if so, how the emotionality of those memories relates to that of true memories. We move next to a body of work that addresses the relationship between witness affect and witness credibility.

Emotional Testimony by Mock Witnesses

Several mock jury and similar studies have demonstrated the importance of witness affect in determining witness credibility, and by extension, the outcomes of cases. Golding et al. (2003) assert that

> it is generally accepted that the demeanor of a witness is critical to judging the credibility of the witness. Judge Freedman, in the case of *Government of the Virgin Islands v. Aquino* (1967, p. 548), stated that "demeanor is of the utmost importance in the determination of the credibility of a witness. The innumerable telltale indicators which fall from a witness during the course of his examination are often much more of an indication to a judge or jury of his credibility and the reliability of his evidence than is the literal meaning of his words" (p. 1312).

Researchers have conducted mock jury studies in which the emotion of witnesses is varied, but in most cases the witnesses in question are the defendants. If emotion alters the credibility of these witnesses' statements, it likely does so by making them seem more remorseful rather than more accurate. For example, Spackman et al. (2002) found that reporting that defendants had experienced different emotions and dwelt on those emotions to different extents affected mock jurors' murder/manslaughter convictions. Heath et al. (2004) found that defendants displaying higher levels of emotion were seen by mock jurors as more credible (and were less likely to be convicted), especially when the evidence against them was weak. (But see also Myers et al. 2002.)

There are a few studies that examine the effects of emotional testimony by victims and other non-defendant witnesses. Tsoudis and Smith-Lovin (1998) conducted a study that manipulated the emotional expression of both the perpetrator and the victim. The authors hypothesized that "the emotional states of the perpetrator and victim will create impressions about the severity of the criminal behavior, with a more neutral perpetrator emotion and a more distressed victim both leading to impressions of a more heinous act," (p. 703) but this hypothesis was not supported, perhaps because of the idiosyncratic (and separate from the narrative) non-verbal cues used to signify emotion in the victim and perpetrator. Regan and Baker (1998) manipulated the demeanor of a child witness during a confrontation with a defendant. They found that crying youngsters were more credible than calm ones, and

that mock jurors were more likely to convict based on the testimony of the emotionally expressive children. Golding et al. (2003) manipulated both presence versus absence of emotion as well as emotion type (teary or hysterical) and found that a moderate amount of emotional expression (teary) led to the highest proportion of favorable mock juror decisions.

Kaufman et al. (2003) created a videotaped rape victim's testimony, with different versions varying in emotional expression and case strength. They found that emotion was more important than testimony content in determining witness credibility, and as important in decisions about guilt. Dahl et al. (2007) used the same stimuli and found that the effects of witness affect were attenuated when mock jurors had a chance to deliberate before making determinations of guilt. Wessel et al. (2006) found that judges were less affected by emotional testimony than lay people (though see the comments of Judge Freedman, above), but Bollingmo et al. (2008) found that police investigators were as susceptible to emotional testimony as lay persons, meaning that emotional witnesses could be more likely to end up in court to begin with.

The totality of these studies suggests that emotional witnesses can be particularly powerful and credible witnesses. Though the specific issue of perceived memory accuracy was not addressed in any of these studies, we can assume that if mock jurors found the witnesses to be credible, and allowed the witnesses' emotions to sway their judgments, they must have believed them to be accurate. And this seems to be a general assumption of people – if someone is genuinely emotional about a memory, then that memory must be genuine. This assumption may be related to individuals' confident beliefs in their own memories for some kinds of emotional events. For example, so-called flashbulb memories, generally associated with hearing significant and emotional news (like the death of JFK or the bombing of the World Trade Center on September 11th, 2001) are typically associated with extremely high levels of confidence (e.g., Neisser and Harsch 1992). Talarico and Rubin (2003) found that initial ratings of the emotionality of the September 11th attacks predicted subjects' later belief in the accuracy of their memories.

But is this assumption that emotion signals accuracy justified? Does the genuine emotion expressed by some trial witnesses ensure the accuracy of their memories, or even the basic truth of those memories? Or can false memories be not only held with great confidence (e.g., Loftus 2004), and reported with substantial detail (e.g., Loftus and Bernstein 2005), but also felt with considerable *real* emotion? For an initial answer to this question, we can refer back to the flashbulb memory literature. Although flashbulb memories are associated with emotionality and very high confidence, evidence for their accuracy is much shakier. Neisser and Harsch (1992) found that, when tested three years later, although subjects were quite confident about the details of their memories for the Challenger explosion, their memories in fact showed a wide variety of errors (just as with other types of memories). Talarico and Rubin (2003) likewise found that emotionality and confidence failed to predict consistency between initial reports and later memories.

Laney and Loftus (2008) sought to address this issue in a different way: by creating a set of false emotional memories in the laboratory, and then comparing them to a

set of true memories for the same events. Before we address this study, however, we need to discuss the previous research in the area of emotional false memories.

True and False Emotional Memories

The original "lost in the mall" study (Loftus and Pickrell 1995) had emotional content. Since then, however, relatively few studies have produced emotional false memories, even fewer have measured the emotionality of the memories, and fewer still have compared true and false memories on the dimension of emotionality.

Hyman et al. (1995) used the "lost in the mall" procedure to give subjects false memories for a total of five different events. Three of these events – being hospitalized overnight with an ear infection, being in a store when the sprinkler system was activated, and being alone in an out of control car – could have been very emotional had they in fact been experienced. These authors, like Loftus and Pickrell (1995), were primarily interested in the likelihood of developing a false memory, so the emotional content of the resulting memories was not discussed.

Pesta et al. (2001); see also Kensinger and Corkin (2004) used the Deese-Roediger-McDermott (DRM) paradigm to produce false memories for emotionally charged words, like "rape" and "bitch." The DRM paradigm (after Deese 1959; Roediger and McDermott 1996; see also Read 1996) is a commonly used method for creating false memories. In these studies, subjects are presented with a list of words, like *bed*, *nap*, *pillow*, and *tired*, that are all closely related to another word (here, *sleep*) that is *not* part of the list (this word is called the "critical lure"). In subsequent memory tests, subjects are often as likely to remember the critical lure (*sleep*) as they are to remember many of the words that were actually part of the original list. Put another way, they frequently, but falsely, remember that the critical lure was part of the original list.

Howe (2007) used the DRM procedure to give false memories for neutral words (chair, fruit, sweet) and emotional words (anger, cry, lie) to 8- and 12-year-old children. He found that although true neutral words were better recalled than true emotional words, false emotional words were more likely to be remembered than false neutral words. Additional research shows that traumatized individuals, as well as individuals claiming to have been abducted by space aliens, are particularly susceptible to creating false memories in this procedure (Clancy 2005; Clancy et al. 2002; Clancy et al. 2000).

Other researchers have modified existing emotional memories rather than creating them. They have tended to find that emotional memories are somewhat more susceptible than neutral memories to alteration after exposure to post-event information. Porter et al. (2003) showed different subjects positive, negative, and neutral scenes, then gave them leading questions about the content of the scenes. They found that those who had watched the negative scene were much more likely to incorporate the misleading information into their memories. Drivdahl (2001) found that when subjects elaborated on emotional details of their memories, they were

more susceptible to suggestion than when they elaborated on other types of details. Nourkova et al. (2004) asked subjects to recall details of one of two terrorist bombings and then suggested that they had seen a wounded animal at the time. A significant proportion of those subjects who had recalled the more personally emotional attack (rather than the less personally emotional attack) adopted the false information.

All of these studies demonstrate that emotional memories can be distorted or even created out of whole cloth. They do not, however, directly compare true and false memories. A set of additional studies, discussed next, do compare true and false emotional memories, though not for the same events.

Hyman and Pentland (1996) used a variation of the "lost in the mall" procedure to implant false memories of spilling punch on the bride's parents at a family wedding. They found that this false memory was less emotional than true memories for other events like causing mischief with a friend or going to the hospital. But the spilling punch event was not intended to be particularly emotional, so this is hardly surprising. In addition, the authors remarked that after exposing several hundred participants to questionnaires containing this item, they had yet to find a single true memory for this event. As such, there is no possibility of a direct comparison of emotionality of true and false memories for this event.

Heaps and Nash (2001) also used the "lost in the mall" technique to implant false memories for several different events from the 42-item Life Events Inventory (LEI) created by Garry et al. (1996). More than one-third of the sample produced false memories, and this set of false memories was compared to the same subjects' presumably true memories for other events from the LEI, on a within-subjects basis. True memories had several advantages over false memories (which were, again, for different events), including greater ratings of importance, emotional intensity, imagery, and less typicality. In subsequent analyses, however, all of these differences were eliminated when rehearsal was included as a covariate. Thus, the benefits accrued to true memories were better explained as benefits of repetition – of people repeatedly thinking and talking about these events – than as benefits of memory truth.

Porter et al. (1999) used a variation of the "lost in the mall" technique to give 20 subjects "complete" false memories for six different emotional events: "a serious medical procedure, getting lost, getting seriously harmed by another child, a serious animal attack, a serious indoor accident, and a serious outdoor accident" (p. 521). The 77 subjects in the study also produced 75 true memories and 77 fabricated memories (intentional deceptions created with a goal of fooling the interviewer). The three different types of memories were compared along several dimensions, including how stressful the relevant events had been at the time. True and false memories did not differ on this measure, though both types were rated as less stressful than fabricated memories. Porter et al. did not report within-event comparisons of true and false memories, so we cannot know whether the overall similarities held up when true and false memories for the same events were compared. In addition, the single self-report measure of "stress" does not give a full picture of the emotionality of the reported memories.

Research by McNally et al. (2004b) provides a more complete picture of emotionality of true and false memories – though still for different events. These researchers measured the physiological responses (heart rate, skin conductance, and facial electromyography) of subjects as they listened to tape-recorded narrations of their memories. The false memories used in this research were of a rather different type than those described above. Rather than implanting false memories for emotional events, McNally et al. found a ready set of false memories in the community: people who believed they had been abducted by space aliens (for more information about this interesting population, see Clancy 2005). These "abductees" were brought into the laboratory to listen to narrations of their abduction memories, memories of other traumas, positive memories, and neutral memories. Few differences were found in subjects' responses to their (presumably false) abduction memories and (presumably true) trauma memories, though both produced greater physiological responses than positive or neutral memories. In their discussion of this study, McNally et al. (2004a) concluded that "emotional responding during recollection provides no guarantee that the memory is veridical," (p. 146).

McNally et al. (2004b) present an elegant comparison of true and false memories, but the true and false memories that they compare are still for entirely different events. Just as Hyman and Pentland (1996) were not able to compare true and false memories for spilling punch on the bride's parents at a wedding, McNally et al. were not able to compare true and false memories of being abducted by space aliens. Although the "abductees'" abduction memories and other trauma memories produced similar physiological responses, they may have been different from each other in ways that make direct comparisons inconclusive. In addition, it is hard to draw conclusions about human memory generally from a study that drew from a population of people who believed they had been abducted by space aliens. This is potentially a very special population, and the memories they describe may represent a very narrow range of emotional response.

Comparing True and False Memories for the Same Emotional Events

Our own research was designed to build on the results of McNally et al. (2004b) by comparing true and false memories for the same events in a college student sample (Laney and Loftus 2008). After extensive pilot testing of 73 different emotional childhood events utilizing 256 subjects, we identified three childhood events that were sufficiently emotional and plausible for our sample, but also not too commonly experienced by them: (1) "you were hospitalized overnight (besides when you were born)," (2) "you witnessed a physically violent fight between your parents," and (3) "you caught your parents having sex." Each of these events had been experienced by approximately 20% of tested subjects – a desired result because we wanted to have a sample of "true" memories for each item that was approximately the same size as our expected sample of false memories. Each of the events

was also rated as highly emotional, though they are certainly not emotional in the same way.

Once we had identified our three emotional event items, we used a variation on the false feedback procedure, described in detail above, to implant false memories in our subjects. A total of 301 undergraduate subjects (75% female) were brought into the lab. Each subject was randomly assigned to one of the three false memory items before they arrived. Subjects were given a cover story that the study was about emotional intelligence, and were told that they would be filling out questionnaires about their emotional experiences. Figure 6.2 displays a schematic of the full study procedures.

In the first study session, subjects completed various personality measures that supported the cover story. They also completed two critical questionnaires. The first was a confidence measure, the Emotional Experiences Catalog, which asked how confident subjects were that each of 26 potentially emotional events had happened to them, on a 7-point scale anchored at −3 = *I am sure it didn't happen* and 3 = *I clearly remember it happening*. This list included all three of the critical events, plus a wide variety of other events, like "you won a trophy at a swim meet" and "you learned that a family member had cancer." The second critical questionnaire was an emotionality measure, the Emotionality of Life Experiences questionnaire, which presented subjects with the same 26 items, in the same order, but this time asked them to rate how emotional the events had been (if they had experienced them) or would have been (if they had not personally experienced them), on a 7-point scale anchored at 1 = *not at all emotional* and 7 = *more emotional than anything else*. Subjects were then told that their data would be analyzed by a sophisticated computer system, which would return a personality profile for them when they came back to the lab.

After a 1-week delay, participants returned to the lab for Session 2 and were indeed handed a "profile." But this profile had not in fact been created specifically for them by a sophisticated analysis program. Instead, the content of each profile was primarily determined by the subject's experimental condition. There were a

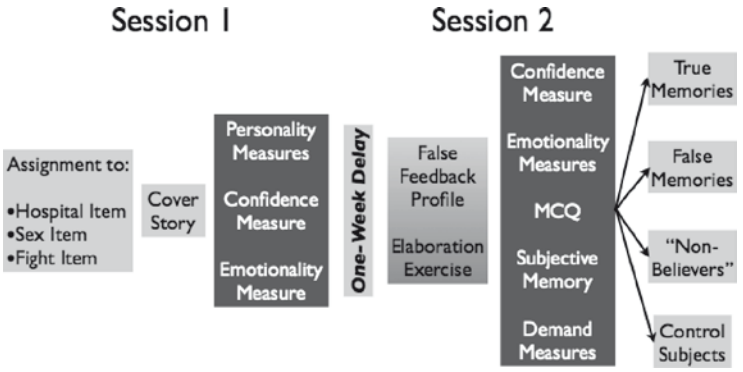

Fig. 6.2 Schematic of Laney and Loftus (2008) procedures

total of nine conditions. For each of the three different critical items ("you were hospitalized overnight"; "you witnessed a physically violent fight between your parents"; "you caught your parents having sex"), there were true memory subjects (who were already quite sure that the relevant event had happened to them), potential false memory subjects (whom we manipulated in the hopes of giving them false memories), and control subjects (who did not have true memories and were not manipulated). All profiles had the subjects' names at the top, followed by a personality profile that was indeed based on participants' responses to one of the questionnaires from the first session. These were designed to lend extra credibility to the information that followed. For true memory subjects and potential false memory subjects, this information included a claim that "The childhood experience that has contributed most to your emotional development is: [the subject's critical item]." For control subjects, there was no mention of the critical item on the profile. This profile was the manipulation for the study. We expected that potential false memory subjects would read the profile and, because the information was said to have come from a sophisticated computer system, believe that it was true of them.

Attached to the profile was an elaboration exercise, which was designed to give subjects the opportunity to think further about the possibility that the profile was accurate, and to develop more detailed false memories as appropriate. In order to allay suspicion and to maintain consistency across conditions, control subjects elaborated about their memory of their first day of school (an event unrelated to any of the critical items).

After they had read their profiles and completed the elaboration exercise, subjects were given a second set of questionnaires. Besides additional copies of the confidence and emotionality measures completed in Session 1, subjects completed an Emotion Specificity form, in which they were asked to rate how much they felt each of three different emotions for each of 11 items from the confidence measure. They also completed a Memory or Belief Form (just like that described above for the false food memory studies), and a shortened version of Johnson et al. (1988) Memory Characteristics Questionnaire (MCQ) that included all of the emotion related items from the original questionnaire. Finally, they completed a questionnaire designed to assess whether they had seen through the cover story and determined the true nature of the study.

When all of the study procedures had been completed, the "potential false memories" group (i.e., those who lacked a true memory for their critical item and had been manipulated on that item) was further subdivided into participants who had in fact developed false memories and those who had not ("non-believers"). As in our previous studies, subjects had to meet several criteria to be classed as having a false memory. Note, though, that the criteria used here were not as strict as those used by Morris (2007). For this study, subjects had to start the study reasonably confident that they had *not* experienced their critical event (with a rating of -3 to -1 on the 7-point confidence scale), they needed to become more confident after the manipulation, and they needed to report a "memory" or "belief" on the Memory or Belief Form. Of the 189 subjects who were manipulated in the study, 39 met all these criteria. Just over half of these subjects ($n=20$) had been manipulated on the hospital item. In addition, 12 sex item subjects and seven fight item subjects had developed false memories.

True memory subjects needed to maintain their initial high levels of confidence (2–3 on the 7-point scale) to the end of the study procedures to retain their classification. This left a total of 42 true memory subjects, of whom 22 had true memories for the hospital item, five for the sex item, and 15 for the fight item. Non-believers ($n=150$) were those subjects who had been manipulated on their critical item but did not meet all of the criteria to be labeled as having false memories. Finally, control subjects ($n=61$) were not manipulated.

As is apparent in the left side of Fig. 6.3, false memory subjects, who were required to increase by one point on the confidence scale in order to be labeled such, increased an average of three points. The confidence levels of subjects from each of the other groups were remarkably stable. The true memory group maintained consistently high confidence (though note that a change in confidence of more than one point by those in the true memory group would have knocked them out of this category), while non-believers and control subjects maintained consistently low confidence. Note, though, that false memory subjects' confidence did not reach the level of true memory subjects' confidence. This difference makes some of the subsequent similarities between these groups all the more impressive.

Although the true and false memory groups demonstrate differing levels of confidence about their memories, the primary focus of this study was the emotionality that these groups attributed to their respective memories. Recall that emotion was measured in several different ways in this study. Subjects completed the Emotionality of Life Experiences Questionnaire both before and after the manipulation. They also completed the Emotion Specificity form after the manipulation. In addition, several items of the shortened Memory Characteristics Questionnaire (completed post-manipulation) specifically address the emotional content of memories.

The results from the Emotionality of Life Experiences Questionnaire can be seen on the right side of Fig. 6.3. For this measure subjects were asked to rate

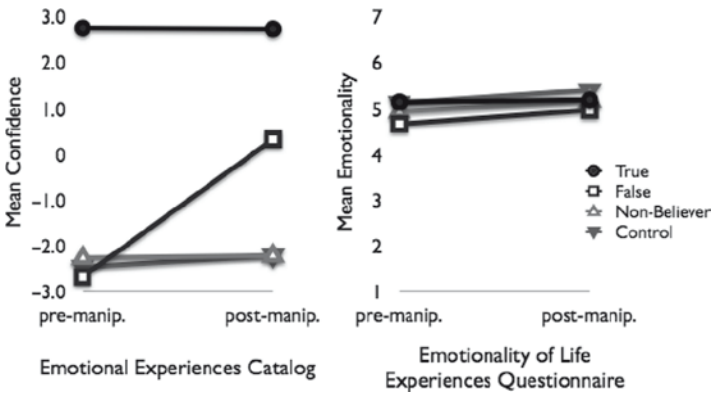

Fig. 6.3 *Left side:* Mean confidence that the critical event happened, before and after the manipulation. *Right side:* Mean emotionality attributed to the critical event, whether or not it had happened to the respondent, before and after the manipulation. All data are collapsed across the three separate critical events

how emotional the events were for them, or, if they had not experienced them, how emotional they thought they would have been. Statistically, there were no differences between any of the four groups of subjects on this item, whether collapsed across item (as in the figure), or analyzed separately. That is to say, subjects with false childhood memories for being hospitalized overnight, catching their parents having sex, and witnessing violent fights between their parents found those false memories to be just as emotional as did subjects with true memories for the same events.

Because the previous measure of emotionality was quite broad, we included other measures. Subjects were asked the extent to which they attributed each of three different specific emotions to their critical item (and 10 other items) on the Emotion Specificity Form. For the hospital item, subjects were asked how much fear, pride, and pain they felt. For the sex item, subjects were asked how much fear, confusion, and disgust they felt. For the fight item, subjects were asked how much fear, sadness, and responsibility they felt. Once again, there were no differences in how subjects rated true versus false memories.

Finally, subjects completed five emotion related items from the previously validated Memory Characteristics Questionnaire (Johnson et al. 1988), all on 7-point scales. These items were: "The overall tone of the memory is (*negative* to *positive*)"; "I remember how I felt at the time when the event took place (*not at all* to *definitely*)"; "Feelings at the time were (*negative* to *positive*)"; "Feelings at the time were (*not intense* to *intense*)"; and "As I am remembering now, my feelings are (*not intense* to *intense*)." Figure 6.4 shows the results from these items.

Statistically, there were no differences between true and false memories (when these two groups are compared head-to-head, collapsed across item) for two of the five items, memory tone and positivity of feelings. But the three remaining items did provide significant differences between true and false memories (though, again, only when the data are collapsed in such a way as to maximize differences between these two groups). Specifically, true memories were associated with more memorable feelings, and with greater emotional intensity, both at the time of the event and as the subjects remembered.

These differences, in addition to being rather minimal, are once again unhelpful in differentiating between future true and false memories. That is, although true memories tended to be remembered as somewhat more intense, for example, there were still three false memory subjects who rated the intensity of their memories as seven out of seven on this scale. Thus, a person who presents with a memory that he or she rates as seven out of seven on a scale of emotional intensity, could still have a false memory.

How do we rate the overall emotionality of these memories? If some false memories appear to be as emotional as some true memories, on at least some items, it is important to quantify this. That is, we need to determine what proportion of false memory subjects have false emotional memories that look like true emotional memories. But what does "looking like a true emotional memory" mean? True emotional memories had two primary characteristics: They were associated with high confidence (because this was required for them to be classified as true memories) and high emotionality on each of six separate general emotion measures

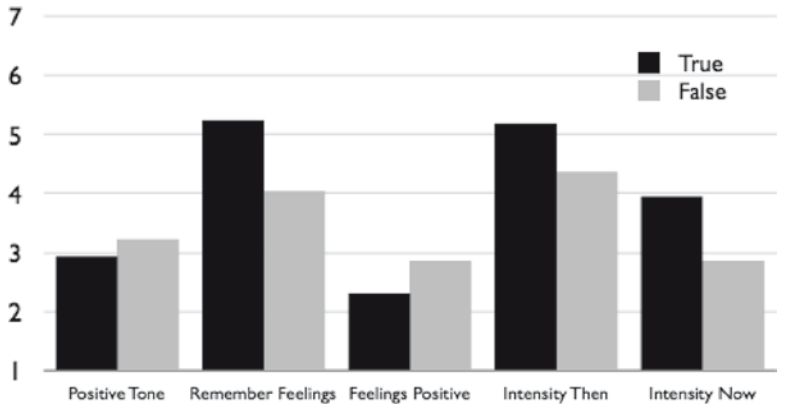

Fig. 6.4 Mean ratings by true and false memory subjects for each of the five emotion related items from the Memory Characteristics Questionnaire (Johnson et al. 1988)

(which were the same for all subjects) and three specific emotion measures (which varied by critical item). Because even true memories were not universally rated as highly emotional, we created a threshold level of emotionality for each of the six general emotion measures that represented the level that most true memories reached. If a particular memory fell within this range for a particular emotion item, then it is reasonable to say that the memory "looks like a true memory" on that item. So how do true and false memories compare, with respect to "looking like a true memory?" As mentioned previously, the post-manipulation confidence levels of false memory subjects were still significantly lower than those of true memory subjects. Just 12 of the 39 false memory subjects ended the study with confidence ratings of "2" or "3," which were required of true memory subjects. But with respect to emotionality, the picture is rather different. Seventeen true memory subjects (40%) had emotion ratings across all six emotion items that made them "look like true memories." So did 15 of the false memory subjects (38%).

True and false memories were also compared on other items from the Memory Characteristics Questionnaire. True memories were rated as sharper, involving more visual detail and more sound, and more vivid than false memories. Additional results demonstrated that these results were unlikely to be the result of demand characteristics. Only a small proportion of subjects (20%) were able to determine that they were in a false memory study at the end of the study procedures, and when these subjects were removed from analyses, the results did not change substantially.

Implications of This Research

If false memories can in fact be just as emotional as true memories, what does this mean for those who depend on memory accuracy? In particular, what does it mean

for those who sit in a jury box and listen to a witness describing a highly emotional memory? And what does it mean for people assessing their own emotional autobiographical memories? At the broadest level, it means that neither the juror nor the everyday rememberer should give memories more credibility simply because they are emotional. Just because memories are emotional, it does not mean that they are guaranteed to be accurate. As such, emotional content is added to an already long list of factors that *should*, but do not actually reliably signal differences between true and false memories. Other factors include confidence (Loftus 2004), detail (Loftus and Bernstein 2005), consequences (Bernstein et al. 2005b), and longevity (Geraerts et al. 2008; Laney et al. 2008a).

But on a more practical level, we certainly understand that emotional memories are often given more credibility because of their emotional content. The few studies that we have discussed here will probably not be sufficiently compelling to change this strong bias. We note, though, that the evidence is building, and that defense lawyers and expert witnesses should now be able to support their claims that even strong emotions felt and expressed by alleged victims do not guarantee the accuracy of their memories for the harm that they allege.

Conclusions

In the aggregate, true and false memories for the same events are different in some important ways. Some studies have found that true memories are held with greater confidence, are more vivid and detailed, use the first person more, and are even (on some limited measures) more emotional than false memories. True and false memories have also been found to be associated with processing in different areas of the brain, particularly at the memory encoding stage.

But these aggregate level results have not always been replicated, and no matter, aggregate level differences are deceptive. No study has yet found a specific factor that will reliably signal a true or false memory. That is, just because a memory is confidently held, vivid, detailed, self-referent, and emotional, that does not mean that the memory is true. Likewise, a lack of any or all of these factors does not make a memory false.

If there is one message we would want to communicate to the public that flows from this research it is this: Just because a person expresses a memory with considerable emotion, does not mean that the memory is real.

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Chapter 7
A Moody View of The Law: Looking Back and Looking Ahead at Law and The Emotions

Jeremy A. Blumenthal

Introduction

The current Symposium celebrates 3,400 years of law and emotion. How so? In Leviticus, Chapter 19 Verse 15, judges are instructed to judge rich and poor alike – interestingly, they are, separately, told not to favor the poor and not to favor the rich, but rather to do justice equally. Some interpreters read the prohibition on favoring the poor as trying to ensure that even positive emotions such as sympathy do not bias legal decision-making. Indeed, as this Chapter goes to press, the confirmation hearings for Judge Sonia Sotomayor are highlighting just such issues. Alternatively, we might say that we celebrate more than four centuries of law and emotion: In the late sixteenth century the common law began to recognize the offense of manslaughter, where a killing occurred in the course of a brawl or "chance [or chaunce] medley," reflecting the passion or emotional state of those engaged in fighting (e.g., Brown 1963; Dressler 1982).[1] We might also say that the psychological study of law and emotion is about 100 years old, harking back to the foundational legal psychological work of Hugo Munsterberg (1908) and his study of the biasing impact of emotion on memory and judgment, and of the clues that emotional reactions could give to a defendant's guilt or innocence.

Most of these approaches, of course, reflect the traditional view that emotion is corruptive, biasing, something to be avoided and that should thus be excluded from legal judgments (Blumenthal 2005a,b; Bornstein and Wiener 2006; Kahan and Nussbaum 1996). This "emotion is corruptive" perspective is the conventional view in the law (Blumenthal 2005a,b; Feigenson, Chapter 3, this volume; *Gardner v. Florida* 1977, p.358). And such a view is hardly unreasonable – there is little question that affect *does* influence decision-making, as each of the Symposium chapters, as

J.A. Blumenthal
Syracuse University College of Law, Syracuse, NY, USA
e-mail: jblument@law.syr.edu

[1] Dressler (1982) has an excellent discussion of the development of the manslaughter and "heat of passion" doctrines, with their connection to provocation and the chance medley rule.

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well as substantial previous research, demonstrates. For instance, emotionally charged courtroom testimony or graphic photographic evidence can influence verdicts and damage awards (Douglas et al. 1997; Feigenson, Chapter 3, this volume; Fishfader et al. 1996). As Kerr (Chapter 4, this volume) points out, sometimes emotion can lead to nullification "chaos." As Forgas demonstrated more than 20 years ago, interviewing movie-goers after seeing happy, aggressive, or sad films, happy film viewers gave less punitive judgments (Forgas and Moylan 1987). Irritating attorney behavior can lead to verdicts unfavorable to that attorney's client (Kaplan and Miller 1978). Research on the Defining Issues Test shows that a respondent's mood can influence his moral reasoning scores, leading to categorization into different Kohlbergian stages (Olejnik and LaRue 1980; Wells 1992; Zarinpoush et al. 2000). Moreover, mood can influence explicit judgments of morality (Blumenthal, 1998, 2005a), as well as philosophical hypotheticals such as the trolley problem (Valdesolo and DeSteno 2006). In particular, Blumenthal (1998, 2005a) found that positive mood led to more superficial judgments of morality (consistent with social psychological evidence of mood's influence); Valdesolo and DeSteno (2006) found that positive mood led to more utilitarian judgments (for personal, but not "impersonal" moral issues). Both findings suggest something to be wary of: As Valdesolo and DeSteno put it, "[S]killed manipulation of individuals' affective states can shape their moral judgments" (2006, p.477).

But another theme running through this Symposium – again noted by Munsterberg (1908) a century ago – is that emotions can also be useful and beneficial, helping to orient us toward dangerous or personally salient stimuli (e.g., Lieberman et al. 2001) or, in some instances, to inform and assist decision-making, not corrupt it–again, as suggested by some at Judge Sotomayor's confirmation hearings. Recent theories of moral judgment (e.g., Haidt 2001) emphasize affective primacy, as did eighteenth-century moral philosophers such as David Hume and Adam Smith, and, as discussed below, may have important implications for legal decision-making. And at least implicitly, the legal system acknowledges that emotion has some place in the courtroom, through its emphasis on the role of the jury as the "conscience of the community," in its acceptance of victim impact statements, or in its approval of the "heat-of-passion" defense. At times that perspective is even more explicit: One court has even held that an attorney may have an ethical obligation to show emotion and to cry: "Tears have always been considered legitimate arguments before a jury…. It would appear to be one of the natural rights of counsel which no court or constitution could take away…. Indeed, if counsel has them at command, it may be seriously questioned whether it is not his professional duty to shed them whenever proper occasion arises" (*Ferguson v. Moore* 1897, p.343).

Accordingly, starting from some of these insights – in particular about the proper role for emotion in the law–my goal here is to sketch where the study of emotion and the law has been, where it is now, and where it might go. Each of the excellent papers in this Symposium represents an important inspirational – and aspirational – part of tracing these stages.

Ghosts of Research Past

So where has the field of law and emotions been? Unfortunately, largely hidden (Blumenthal 2007a; Maroney 2006). There is of course a rich tradition of study of the emotions by philosophers, reaching back to antiquity and even the pre-Socratic philosophical schools (Kahan and Nussbaum 1996). This tradition influenced political philosophy and moral philosophy in particular – most famously Hutcheson, Smith, and Hume's ideas of moral senses, moral sentiments, and moral emotions – with threads that, as we'll see, have been picked up again in the last two decades or so. But this is the sort of armchair hypothesizing with which empirical psycholegal scholars are often uncomfortable. So, in particular, where has the *psychological* study of law and emotion been? Emotion was studied empirically at the turn of the twentieth century, as laboratory psychology was developing. Legal scholars at this time did write about the doctrine of provocation and manslaughter. And case law did develop regarding (among other topics) those doctrines, the appropriate rules of evidence, and appropriate damages for emotional harms. But although these three paths were progressing, there was surprisingly little juxtaposition of the three – that is, the application of *empirical*, psychologically-based or -informed research to those or other legally relevant issues.

There are hints and examples, of course. From early on, Munsterberg (1908) and others (see Whipple 1914) examined the influence of emotion on memory and the accuracy of testimonial reports, work that continues today. In the late 1920s researchers built on the Darwinian study of emotional expression to study whether individuals could accurately identify expressed facial emotion. Fernberger (1930), for instance, found that subjects were inaccurate at such identification, though they were somewhat better when asked to recognize emotions (i.e., when an emotion was named and they were asked whether the expression reflected that emotion). Although the research did not use actual witnesses or actual trial situations, the researchers claimed relevance to trials at which a witness would testify as to the emotional state of someone he observed. Based on subjects' inaccuracies, they advocated caution about accepting witnesses' statements about their observations of others' emotions. In the early 1930s, those studying juvenile delinquents advocated better emotional regulation by delinquents to avoid their succumbing to peer influence (e.g., Beckham 1933). And on the legal side, at least one 1940s author pushed for judges to take formal notice of empirical research on emotion to reduce awards for emotional or psychic harms (Smith 1944). And throughout, both psychologists and legal academics maintained interest in various ways to detect deception, especially through the use of mechanical devices (Inbau 1935, 1942; Marston 1917, 1921).

But these and other sporadic examples were just that, sporadic hints. In part this reflects the slow development of psychology and law more generally (Blumenthal 2002). But in part it reflects the adherence to traditional assumptions about emotion and the role of emotion in decision-making, assumptions that in large part have lasted to modern times: assumptions about how emotion is expressed; that emotions were easy to parse, classify, and identify; that emotion was easily and reliably regulated

by conscious effort; that emotions weren't "real" enough to be injured or warrant compensation. Courts return to this last assumption, for instance: In cases in which someone thought, and feared, he was exposed to an illness or injury, but in fact was not, damages have been denied despite the real *fear* of exposure. Courts' reasoning has been that there was no objective, actual, *real* danger, and thus no objective, *real* damages were warranted (e.g., *K.A.C. v. Benson* 1995, pp.557–560; *Heiner v. Moretuzzo* 1995; *Western Union Telegraph Co. v. McKenzie* 1910).

Ghosts of Research Present

Psycholegal scholars, however, have made a crucial move to a stage of increasingly legally relevant research on emotion. The move has been from an adherence to those assumptions to a willingness to test them, to looking more closely at how emotion works, at how the law treats emotion, and at the proper role of emotion in the legal system. Testing assumptions is likely the most important role that empirical social science can play in its relationship with law and policy (Blumenthal 2002; Cairns 1935; Grisso and Saks 1991). More important, this testing must be based on solid, sophisticated psychological theory (Blumenthal 2002; Small 2002; Wiener and Hurt 1997; Wiener et al. 2005).

The Symposium contributors succeed with this approach. In the 1970s, Prof. Loftus's influential work laid the groundwork for research studying eyewitness testimony; she challenged – and refuted – the assumption that memory worked as a camera or video recorder, accurately reporting what an individual observed. Here, too, she lays the groundwork for more research (Laney and Loftus, Chapter 6, this volume), echoing Fernberger's (1930) study and challenging assumptions about how emotion is reflected and how it can be used as a veridical cue to memories (or, as she showed, cannot be used; see also McNally et al. 2004). One next step in such research is investigating how jurors view such testimony, and how expert testimony might affect their perceptions. Other aspects of her research have crucial policy implications as well.

Prof. Forgas (Chapter 2, this volume) raised the perhaps counterintuitive positive aspects of negative mood, challenging not only the idea that emotion is per se corruptive, but also the idea that even if that is not true, only positive affect has positive influence. Some of his previous work has raised this possibility, reflecting evidence that negative mood generally can lead to less superficial analysis, less stereotyping, and more thorough analysis relative to positive moods (Forgas 2002; Schwarz et al. 1991; Park and Banaji 2000; for a general review see Forgas 1995). Note that this is one example of the important distinction between mood and emotion, however; that is, between incidental affect unrelated to the judgment at hand and emotion generated from the target of the judgment. Negative *mood* can be beneficial in the ways just described. Negative *emotion*, however, can in some instances lead to increased susceptibility to persuasion, as in anxiety or fear (e.g., Blumenthal 2008); or to increased punitiveness, as with gruesome photographs (Douglas et al. 1997); or to irrational decision-making, as when the vividness and emotional salience of a negative emotional stimulus event leads people to mispredict the probability of that event

(e.g., Rottenstreich and Hsee 1999; Sunstein 2002). Consider the implications for the courtroom that arise from Forgas's (Chapter 2, this volume) dysphoria research; add to this the distinctions emerging between not only the influence of positive and negative affect, but also the influence of different types of affect of the same valence (e.g., Tiedens and Linton 2001), and there is a rich vein of potential research for psycholegal scholars.[2]

Prof. Feigenson is in a way subversive in his challenge. Here and elsewhere he has engaged in prodigious review of the relationship between law and the emotions, both descriptively and normatively, focusing on the role of emotion in jury decision-making (e.g., Feigenson 1997, 2000, 2001, Chapter 3, this volume; Feigenson and Park 2006). From the breadth and depth of his work, we might assume that much is known about such decision-making: Yet throughout his work, he often returns to a particular trope – we do not know about this effect or that assumption, and more research should be done. He is careful to document what we know, and what assumptions are validated or challenged, but he just as rigorously shows what we do *not* know, and why it matters – even better, as in this volume's contribution in particular, he points out specific research questions that need to be addressed.

Prof. Kerr's nullification work (Horowitz et al. 2006; Kerr, Chapter 4, this volume) reflects the important idea that testing assumptions need not mean disproving them – that data can support assumptions in the legal system rather than only challenging them. His findings provide some support for the idea that nullification instructions *can* lead to "chaos," as critics have worried – at least under certain conditions. Importantly, he shows that those circumstances – emotional cases with the possibility for emotional confusion – are precisely the circumstances where those critics might most worry about nullification.

Finally, Prof. Lieberman (Chapter 5, this volume) provides data that are vital to law and emotion research in a number of ways. First, the focus on the emotional aspects of "hate crimes" – that is, on the "hate" part rather than the "crime" part – sets the research apart from much legal work in the area, which typically focuses on First Amendment liberties or on whether a jury trial is required on certain sentencing factors (see Maroney 2006, pp.124–125). Second, the terror management approach captures missing aspects in the discussion of hate crimes, orienting investigation toward more than *just* "hate." Rather, Lieberman acknowledges the importance of focusing on the hate and fear experienced by the offender, but more important, emphasizes the emotions experienced by the perceivers and thus sentencers. Third, in this way the data make an important contribution to a substantive area of law, providing data for legal actors much as the recent work on emotional underpinnings of anger, fear, and provocation do for manslaughter doctrine (Sherman and Hoffman 2007). Those recent debates about jury decision-making in the hate-crime context can now be informed by data, not just assumptions.

Lieberman's data also inform a specific current debate in legal academic discussion of law and emotions, one hardly touched on by psychologists: the role of emotion in "cultural cognition" (e.g., Kahan 2008). Terror Management Theory (TMT) emphasizes the importance of cultural worldviews as identity-salient. Cultural

[2] Indeed, as noted further below, researchers are beginning to distinguish the effects of emotions with the same valence, comparing, for instance, the effects of anger and sadness. Some of these studies have direct relevance for legal issues, such as the suggestibility of child witnesses (e.g., Levine et al. 2008).

cognition, too, has focused on showing the impact of worldview – hierarchical vs. egalitarian, individualist vs. communitarian – on risk perception and on the interpretation of facts, and thus on ultimate policy judgments and judgments of criminal responsibility (Kahan 2008; Kahan and Braman 2006; Kahan et al. in press). That is, cultural cognition posits worldview- or value-driven interpretation of facts, interpretation that then leads to differing ultimate judgments. This is somewhat consistent with Lieberman's reading of a vicarious worldview defense that involves alteration of individuals' perceptions of the acts of others (Lieberman et al. 2001, p.561; Schimel et al. 1999). The relationship is still not quite clear, however, because in Lieberman's data, victim blame (that is, an interpretation of fact) did *not* affect outcome. And what is the role of emotion in such processes? For cultural cognition, "emotion enables a person to form an attitude [about risk] that appropriately expresses her values" (Kahan 2008, p.758). But for TMT, affect seems not to play such a role – at least, although mood does not mediate the mortality salience effect (and recall the unexpected similar lack of effect in Kerr's heinousness study [Kerr, Chapter 4, this volume]), it is not clear what direct role mood might have on judgments or on interpretation of the relevant facts. Even so, cultural cognition is becoming an influential model in legal discussion of risk perception, emotion, and criminal punishment. Its focus on cultural worldview, however, could benefit from insight from psychological theory in general and TMT and other implicit theory findings in particular.

Where else is the field now? Other developing work in law and emotion is raising challenges to conventional assumptions. Research on affective forecasting refutes the traditional notion that individuals are able to accurately predict their own emotions as well as those of others – undercutting assumptions about welfare philosophy, capital punishment, tort damages, litigation theory and settlement, negotiation, and many other mainstays of the legal system (Blumenthal 2005b; Guthrie and Sally 2004). And, again, scholars have recently applied psychological research on anger to persuasively show the poverty of the current doctrine of manslaughter and provocation (Sherman and Hoffman 2007).

In an important sign that law and emotion has not only become more mainstream but has also begun to be more internally cohesive, more theoretically diverse, and as one writer has termed it, a "movement" (Satin 1995), the field has had an increasing number of conferences, symposia, and special issues in a range of publications. This Symposium volume is the latest such development, following panels at the 2004 American Psychology/Law Society and the 2006 International Society for Research on Emotions conferences; a 2006 Special Issue of *Law and Human Behavior*; and conferences devoted solely to law and emotions at Berkeley Law School (2007), and at the University of Chicago Law School (2008) – that bastion of law and economics, that stronghold of pure rationality! Importantly, these symposia and panels and special issues and conferences included substantial discussion of meta-issues such as the state of the field, the move toward more empiricism and making use of data, and the ways in which emotion research is and should be recognized as not "just" feminist-based or philosophical.

Finally, this volume's contributions demonstrate the substantive point that primary emotion research has begun to focus on different emotions, not just "emotion"

as a concept. This has of course been recognized; but only since the 1980s and appraisal theory was a solid theoretical and empirical base developed to study it in a theoretically coherent fashion. Further, researchers in psychology have begun to recognize the importance of distinguishing between anticipated and anticipatory emotions (Loewenstein et al. 2001) or expected and immediate emotions (Blumenthal 2005b; Loewenstein and Lerner 2003); between emotion and mood (e.g., Semmler and Brewer 2002); and importantly, between different emotions within the same valence (e.g., Tiedens and Linton 2001). But what is significant is that law and emotion scholars are beginning to apply such insights from emotion research, rather than simply using traditional perspectives and assumptions about the nature and scope of emotion and emotional experience (e.g., Ask and Granhag 2007; Huang 2005).

In that way, what is perhaps most exemplary about the work presented here is that it echoes what Munsterberg strove for, but did not always achieve: The Symposium authors recognize, as did Munsterberg, that psycholegal research generally, and emotion and the law work in particular (Maroney 2006), cannot be divorced from each other – it is certainly the case that psychological work on emotion goes on, but in order to be influential in the law, it has to be connected with legal theory and sophistication. This point demonstrates the importance of the areas to which I now turn – areas that illustrate where the field can go with the benefit of the contributors' approach, building on their work to develop a strong future for the psychology of law and emotion.

Ghosts of Research Future

Where, then, is the field of law and emotion headed? Fortunately, the work presented at this Symposium is not only paradigmatic of the current state of the discipline, but it also demonstrates the promising potential future for the field. I turn now to areas of research that might be fruitful in developing research agendas for the future.

Agenda-Setting

Before identifying specific research areas, though, perhaps the most important move is to set a foundation for future work. Such an effort involves three aspects, none of which should be at all surprising – first, the development of a taxonomy of law and emotion research, in order to provide researchers with a solid theoretical and practical framework for developing future research, and for maintaining and building on what has been accomplished. Second, an emphasis on communication with legal scholars. Third, a focus on ensuring that future law and emotion research is both legally relevant and legally sophisticated – it is, unfortunately, all too easy to have one or the other (psychological theory or legal doctrine), but both are necessary in order for research to make a difference to law and policy.

First, it is essential to provide a framework for the diverse foci of law and emotion research. Feigenson (2001, 2006, Chapter 3, this volume) and Wiener et al.

(2006, see also Bornstein and Wiener 2006) have begun to contribute to this effort. Feigenson's model, though fairly comprehensive, focuses primarily on juror decision-making, and thus serves as a framework for one aspect of law and emotions research, but has not yet been extended to others. Bornstein and Wiener (2006) lay some groundwork for further development of a framework, for instance, advocating the incorporation of emotion into traditional economic rational decision-making models (see also Huang 2005). Despite providing some data illustrating the usefulness of doing so, they do not develop the framework further.

Maroney (2006), perhaps, goes the furthest in doing so, identifying six approaches to law and emotions research – emotion-centered, emotional phenomenon, emotion theory, legal doctrine, theory of law, and legal actor (see Table 1). For instance, an *emotion-centered* project focuses on a particular emotion – disgust, fear, anger, happiness – and tries to understand how it should be reflected in law, policy, and legal judgments. As one example, Maroney notes scholars' disagreement over whether disgust is an appropriate emotion to incorporate into legal decision-making (compare Kahan 1999, with Nussbaum 1999). Feigenson (1997) has taken a similar approach, evaluating the extent to which sympathy is appropriately considered and incorporated. As another example, the *theory of law* approach emphasizes the importance of incorporating emotion research into existing legal theoretical models. For instance, Wiener et al. (2006), and some of Huang's (2000, 2005; Huang and Wu 1992) work as well, show how the straightforward rational actor model can be enriched by including emotion.

These efforts are a good first step. As Maroney notes, however, hers is primarily a descriptive account of existing research and possible future research – rather than a theory-based account. Too often academic debates within psychology lead to perceptions from outside the field that research is atheoretical or shallow, and this is the case with law and emotion research (see Blumenthal 2007a, Note 4).

Table 1 Analytical approaches to law and emotion

Analytical approach to emotion and legal analysis	Defining characteristics
Emotion-centered approach	Analyze how a particular emotion is, could be, or should be reflected in law
Emotional phenomenon approach	Describe a mechanism by which emotion is experienced, processed, or expressed, and analyze how that emotion-driven phenomenon is, could be, or should be reflected in law
Emotion-theory approach	Adopt a particular theory (or theories) of how the emotions may be approached or understood, and analyze how that theory is, could be, or should be reflected in law
Legal doctrine approach	Analyze how emotion is, could be, or should be reflected in a particular area of legal doctrine or type of legal determination
Theory-of-law approach	Analyze the theories of emotion embedded or reflected within a particular theoretical approach to the law
Legal actor approach	Examine how a particular legal actor's performance of the assigned legal function is, could be, or should be influenced by emotion

An important contribution of the present papers is to illustrate the richness of theory-based, legally-relevant research in emotion, and continuing in this vein will be crucial to maintain any progress in the discipline (for additional strong examples see Wiener and Hurt 1997; Wiener et al. 2005; Wiener et al. 2007).

Second, as many psycholegal scholars have suggested for many years (Blumenthal 2002; Ogloff 2000; Saks 1986), the importance of fostering communication with legal scholars, policy-makers, judges, and practitioners cannot be overstated. The most straightforward way to do this in the research context is collaborative work between psychologists and legal academics (see, e.g., Blumenthal 2002; Maroney 2006), collaboration which, obviously, can combine the strengths of the empiricist with those of the doctrinist (for an excellent example see Ceci and Friedman 2000). Whether working on one's own or collaborating, however, an important way for psychologists to disseminate the law and emotion research is to consider publishing in law reviews – rather than psychology journals or even in interdisciplinary outlets such as *Law and Human Behavior* or *Psychology, Public Policy, and Law*. There are a number of practical advantages to such a publication venue – the opportunity for multiple submissions and thus a potentially earlier publication date;[3] increased likelihood that those in the legal system will read it; and increasing receptivity in legal academia to empirical work (though not as much to experimental work).

There are disadvantages as well. Almost no law journal is peer reviewed, so social science department committees may count a law review article less toward tenure. Publication of data in a law journal likely precludes subsequent publication in a peer-reviewed journal. Lack of expertise by those in the legal system who may use the article may lead to research being misused. Moreover – a fact criticized by legal academics as well – those evaluating, selecting, and editing submitted manuscripts are law students, typically ones lacking expertise in empirical work. This may lead to evaluators' not understanding empirical, non-doctrinal work, or not being interested in it (for a related point see Mitchell 2004).

Finally, it is essential to educate and to be educated. The best by-product of publishing in law reviews, for instance, is that psycholegal scholars can educate those in the legal system. Psychologists doing legally relevant research should take advantage of such opportunities, as well as opportunities to publish articles in more narrowly focused outlets, such as *Court Review* or *Judicature*, journals directed at judges and court officials. Judges, and their clerks, typically lack the time and opportunity to read law reviews (Liptak 2007), and read empirical work even less: A well-placed article in such a journal could have more influence than multiple law review or *JPSP* articles. But none of these outlets will have *any* impact if psycholegal work is not legally sophisticated – so psychologists need to be quite sure they are educated about the substantive law in question. Of course, this is important in two ways: First, a researcher simply has to get the law right. A study of whether

[3] Law reviews typically allow authors to submit articles to multiple journals at once. When an author receives a publication offer, the author then often requests an "expedited review" from journals with whom he or she would prefer to publish. Such tactics can continue until either a preferred journal makes an offer or no further journal makes an offer.

juries can ignore hearsay evidence that misunderstands what hearsay is and is not under the rules of evidence is not helpful; nor is one examining jury's punitive damage awards for torts for which no judge would let punitive damages be considered. *Be educated enough to get the law right*. As Munsterberg (1908) said, "To make psychology serviceable cannot mean to simply pick up some bits of theoretical psychology and to throw them down before the public [or the legal system]. Just this has sometimes been done by amateurish hands and with disastrous results." But second, also, educate yourself in the law so that you have more options of what to study! Munsterberg (1908, p.9) also noted that psychologists must "adjust research to the practical problems themselves."

The point warrants further note. Each of the Symposium papers here makes such an "adjustment," and raises the possibility – and demonstrates the importance – of further research on various aspects of law and emotion. Feigenson, for instance, identified specific areas in which data are lacking; Forgas illustrated the burgeoning perspective of seeing emotions in both positive and negative lights; Loftus set the stage for much further research on the emotionality of true and false emotions and how they might be perceived.

But even so, the research presented in these chapters has focused on traditional psychology and law topics – juror decision-making; memory; criminal law. This is understandable; the authors here are experts in these fields. But legal education is a researcher's opportunity to develop an expertise in other areas as well: Quite simply, there is much more to study. Importantly, that much more represents the majority of what the legal system deals with – law is not just about trials, and *emotion* does not only take place during trials. Accordingly, the next sections focus in large part on "growth areas" that are outside the traditional psychology and law purview or are those with which legal scholars are concerning themselves right now.[4]

For instance, what is the role of emotion in *contract law*? Emotions have been found to influence trust in dyadic interactions, especially in the workplace (e.g., Dunn and Schweitzer 2005). Trust, of course, is foundational in forming contracts of all sorts; to the extent that it is susceptible to emotional fluctuation, the ability, and the desire, to enter into contracts will be affected. Legal scholars have emphasized the *cognitive* aspects of trust and contract formation, with only more recent discussion of the emotional aspects (Hill and O'Hara 2007; Korobkin 2003a). Another commentator highlights the manipulation in one-sided liquidated damages clauses in contracts for the provision of emergency services, emphasizing the "experiential" or affective and emotional influences that tend to "impede sound [rational] reasoning" (Marrow 2003, p.49). As a result of the potential for such

[4] I thus omit here areas that are without doubt relevant and important, but where research exists or is being pursued – for instance, therapeutic jurisprudence or the influence of mood and emotion on negotiation. Both areas are relevant to broad aspects of procedural justice, as well; further, the latter is not only relevant to actual negotiation, whether in the deal-making or settlement context, but it also has implications for mediation, arbitration, and other forms of alternative dispute resolution. All of these contexts would benefit from substantial further research. Maroney (2006) gives additional examples of potential research topics.

manipulation, he encourages courts to expand unconscionability doctrine by developing the tort of Consequential Procedural Unconscionability, which could include efforts by a seller or provider who takes deliberate advantage of known emotional biases to manipulate a potential buyer. When a court holds that a contract is unconscionable, it is voided and the parties excused from performance; Marrow argues that such manipulation should be grounds for the manipulated party being excused and the contract voided. Finally, the possibility that emotions will change over time has implications for more specialized contracts concerning surrogate motherhood, frozen embryos (Blumenthal 2005b; Coleman 1999), or prenuptial agreements (e.g., DiFonzo 2000).

Similarly, what is the role of emotion in *property law*? In one example, recent work has focused on grounding the doctrine of adverse possession in loss aversion theory and in the emotional attachment an adverse possessor develops to the property in question, ultimately concluding that "the law refrains from depriving people of lands they have long occupied because doing so would cause them too much pain" (Stake 2001, p.2473). This approach echoes Justice Holmes's classic statement about the basis for adverse possession doctrine, that it "is in the nature of man's mind. A thing which you have enjoyed and used as your own for a long time… takes root in your being and cannot be torn away…. The law can ask no better justification than the deepest instincts of man" (Holmes 1897, p.477).

A similar focus on sentimental or emotional attachment to property arises in the controversial context of eminent domain. An ongoing debate in this context is, of course, whether the constitutionally mandated "just compensation" should include compensation for sentimental attachment to one's home, either on some sliding scale keyed to the length of one's residence, or a flat amount over and above fair market value, etc. Courts typically reject such intangible value, ostensibly because of the difficulty of assessing it. Especially in the wake of the U.S. Supreme Court's decision in *Kelo v. City of New London* (2005), however, there has been recent movement to reform states' compensation practices by awarding compensation for intangible losses (Wyman 2007). Empirical research of the actual connection individuals feel toward their home and toward their social networks, and the psychological impact they experience upon being uprooted, may thus be of profound importance in assessing the factual basis for these arguments (Barros 2009; Stern 2009). Other examples abound, including the influence of affect on consumer behavior (Forgas and Ciarrochi 2001) or the propriety of government intervention to protect consumers against market and advertiser manipulation (Blumenthal 2007a; Hanson and Kysar 1999).

Further, what is the role of emotion in perhaps the most important curricular and practice area for law students – *legal writing*? Forgas (Chapter 2, this volume) commented about the role of emotion in persuasive courtroom speeches, but more important for the majority of attorneys who never see the inside of a courtroom, what is the appropriate role for emotional language and rhetoric in written papers (motions, briefs, etc.)? What is the impact of emotional writing in enhancing or decreasing persuasion in the everyday writing lawyers need to do (Smith 2002; Stanchi 2002, 2005)?

Similar questions, of course, might be asked about the topics of any of the other first-year courses – although issues in *constitutional law*, *criminal law*, and *torts*, again, have received the most attention, *civil procedure* could also be the subject of inquiry (Little 2001).

And, finally, what is the role of emotion in the topics of upper-level law school courses? Table 2 depicts a range of basic such courses, each of which could generate research questions in law and emotions, were psychologists to familiarize themselves with the substantive doctrine in even a rudimentary way, or to collaborate with legal scholars who have such familiarity. Take, for instance, securities regulation. Again, Huang (2005) has argued for a rethinking of substantive securities doctrine because it does not take into account the emotional impact of "puffery" and other emotional language that is included in stock prospectuses. He presumes, on the basis of empirical research into mood, that individuals reading such puffery may consider the prospectuses more superficially, and thus make more risky investment decisions. The hypothesis has not yet been tested, however; empirical research supporting it would contribute substantially to such doctrinal reform. Emotional influence has been raised in the context of legal ethics and professional responsibility, as well. For instance, one recent article advocated a change in the rules of professional responsibility to take into account the potential biasing influence of an attorney representing a family member or someone else with whom she has emotional ties (Buhai 2008). Others argue for skills such as "emotional intelligence" to help develop the ethical and professional qualities students and practitioners need for successful legal careers (e.g., Montgomery 2008; Silver 1999).

Any of the other upper-level courses sketched in Table 2 would also be a source of research questions. The next sections identify additional "growth areas" in law and emotion, ones upon which psycholegal scholars might have a real impact in the near future.

Debiasing

Both Kerr (Chapter 4, this volume) and Feigenson (Chapter 3, this volume) identified one important aspect of emotion with implications for the legal system: Whether, how, and the extent to which it can be regulated; in particular, individuals'

Table 2 Examples of basic upper-level law school courses

Administrative law	Health law
Commercial transactions	Income tax
Conflict of laws	Intellectual property
Corporations	International law
Criminal procedure	Jurisprudence
Environmental law	Labor law
Evidence	Law and economics
Family law	Professional responsibility
Federal courts	Trusts and estates

ability to *correct* affective biases. A good deal of psychological research exists on the means of correcting *cognitive* biases – education and additional information, considering the alternative, flexible correction – but surprisingly little research has been conducted on whether any of these mechanisms can influence *emotional* biases, and some of that research is unclear at best, contradictory at worst (Blumenthal 2007a). To take just one example, although drawing someone's attention to the potential influence of mood on her judgments seems to help attenuate that influence, it is not clear whether that corrective works the same way for positive and negative moods – indeed, some researchers have shown that it works for positive but not negative moods (Gorn et al. 1993); others find just the opposite (Schwarz and Clore 1983).

Other problems exist as well. As a number of scholars have shown, even when individuals are aware of their biases, and are motivated to correct them (no small task in itself), if they are unaware of or incorrect in assessing the *magnitude* of that bias, they are likely to overcorrect – leading to continued bias, but in the opposite direction (Berkowitz et al. 2000; Isbell and Wyer 1999). Feigenson (Chapter 3, this volume) provides a recommended jury instruction that could be empirically tested; however, if jurors are imperfect at assessing the impact of their emotions, then it is not reactance that might ensue, as Feigenson notes, but – perhaps – overcorrection. Fortunately, his suggested study presents an excellent case for testing this specific instruction. Recent work by Linda Demaine (2008) demonstrates that an instruction that acknowledges and recognizes bias – that explains the psychology of the phenomenon – helps jurors disregard or neutralize inadmissible evidence, suggesting that such an approach might be effective. In contrast, however, note Kerr's findings (Kerr et al. 2008) that detailed nullification instructions about emotional issues did not seem to be effective. Finally, research by Roy Baumeister and colleagues on active regulation and ego-depletion demonstrates that even successful self-correction by a knowledgeable, motivated, accurate individual can "use up" that individual's ability to engage in accurate decision-making shortly after that correction (Baumeister et al. 1998; Muraven and Baumeister 2000; Muraven et al. 1998). This might be of special interest in the jury context.

And finally, might group deliberation attenuate individual affective biases? Again, there is conflicting evidence. The research mentioned earlier on irritating attorney behavior suggested that group discussion polarized attitudes (Kaplan and Miller 1978), influencing the bias against the attorneys. Some of Forgas's work (1990), however – albeit in the context of social, not legal judgments – seemed to suggest that group discussion does *not* attenuate mood biases, though the effect, again, may have been different for positive and negative moods. Preliminary data show that group deliberation exacerbates the endowment effect (Blumenthal 2009b), typically considered an emotionally-based bias (e.g., Korobkin 2003b). This is also relevant to Kerr's findings on nullification: His findings suggest that emotional factors, unlike factual or cognitively analyzable factors, are more likely to generate inappropriate nullification outcomes – that is, "chaos" may occur as a result of emotional impact, rather than factual (Kerr, Chapter 4, this volume; Horowitz et al. 2006). Kerr (Chapter 4, this volume) suggests that a drawback of the study as pre-

sented may be the lack of deliberation, but deliberation may in fact not attenuate individual emotional bias, even if it can help address individual cognitive biases.

Why is bias correction so important? A specific example of jurors' inability to correct emotional biases is the possibility of inappropriate nullification; Feigenson (Chapter 3, this volume) reviewed the relevance of jurors' failure to correct more generally. But consider also the application to setting public policy. Legal academics are hotly debating the implications of empirical data showing individuals' tendency to make flawed decisions, especially in the financial, health, and safety contexts. Discussion centers on questions of whether, and how, third parties such as the government should intervene in individual citizens' decisions and behavior in order to "protect" individuals from the negative consequences of those flawed decisions. Very little of this discussion, however, has taken place in the context of *emotional* biases. Can errors in judgment that stem from affect be corrected? Surprisingly little empirical research exists (see Blumenthal 2007a). If we find that we are able to do so, when and how is it appropriate? In this crucial policy area, a great deal of further research is needed.

Benefits of Emotion

Especially as it frames affective influences as "biases" in need of correction, the foregoing section reflects the traditional view of emotion as corruptive and negative. But return to a point running through the Symposium chapters: the potential to focus on the *positive* aspects of emotion. Both prescriptive and descriptive points arise here. Until the last few years, much of the analysis of law and emotion focused on the prescriptive point, analyzing at the philosophical level whether incorporating emotion of various kinds – anger, disgust, fear – is normatively appropriate (see generally Bandes 1999). Now, however, some empirical work is moving to a descriptive perspective on the positive emotions generally, and on the beneficial features of both positive and negative emotions on perceptions, judgment and decision-making, and even policy. Each of these descriptive contexts can benefit from continued empirical research by psychologists.

First, importantly, there is a move away from focusing only on negative emotions toward the study of the experience and impact of positive affect, reflected most clearly in the burgeoning field of *positive psychology* (e.g., Seligman and Csikszentmihalyi 2000). This movement too has yielded both prescriptive and descriptive threads: Some argue for altering the aims of the legal system altogether, from "justice" to "happiness" – as some authors argue, "who needs justice if we are all happy?" (Bagaric and McConvill 2005). Others apply the lessons of positive psychology to suggest ways to ameliorate junior associates' classic dissatisfaction at large law firms (O'Grady 2006; Seligman et al. 2001), or emphasize its relevance in the education (Martin 2005; Noddings 2003) and character building contexts. And – at least in a sense – happiness is making its way into law schools, with seminars being offered at Yale and Temple Law Schools on, for instance, "Law, Happiness, and Subjective Well-Being."

Yet others see an explicit role for the legal system, including policy-makers, legislatures, and courts, in fostering positive emotions and well-being. Legal academics have recently begun to address the possibility of using legal and policy institutions in a more enabling manner, encouraging "human flourishing," the development of various positive emotions, and efforts at different institutional levels to increase subjective well-being more generally (Huang and Blumenthal in press-a, in press-b). Others focus on the law's role in cultivating specific emotions such as *hope* – developing institutional programs that help foster hope, optimism, and positive attitudes, or developing impact litigation designed to help community organization – all with the goal of using the legal system to encourage positive attitudes and emotions (Abrams and Keren 2007). Much of this literature is still speculative, however, and is in need of substantial empirical work to provide data to support or challenge its assumptions and its policy recommendations. Yet other psychological research is more fully developed, but its implications for law and policy have been under-explored, if explored at all. For instance, Barbara Fredrickson's well-developed "broaden-and-build" theory of positive emotions addresses the ways in which "positive emotions – including joy, interest, contentment, pride, and love – although phenomenologically distinct, all share the ability to broaden people's momentary thought–action repertoires… including intellectual… and psychological resources" (Fredrickson 2001). Her work, however, has been only rarely noted by the legal academy (Huang and Anderson 2006; Maldonado 2008; Sternlight and Robbennolt 2008). Thus, although there is evidence, as Forgas points out, that positive emotions generally can benefit cognitive processing and attitudes – and Fredrickson's work is prominent in this respect – there is little application of that evidence to law or policy. More interdisciplinary and collaborative work will be crucial to make this connection, perhaps drawing from the established literature on therapeutic jurisprudence (see, e.g., Wexler 2008; Wexler and Winick 1996).

Happiness

This move toward positive emotions – happiness in particular – is reflected at a number of other levels as well. Burgeoning literatures in economics and psychology purport to prove the cliché that "money does not buy happiness" (e.g., Diener and Biswas-Diener 2002; Easterlin 1995). In particular, the studies suggest, once a certain threshold has been reached, increases in material wealth are uncorrelated with increases in subjective well-being (Frank 1999, p.6). In fact, on the contrary, desire for wealth may be associated with negative psychological functioning (e.g., van Boven 2005). Recent research suggests a counterbalance to such aspiration: A focus on experience rather than possessions – on experiential rather than material wealth – may lead to higher psychological well-being. Experiential purchases (such as vacations, concerts, skiing) – indeed, experiences

broadly – lead to more happiness and better social relationships than material purchases (clothing, jewelry, computers, televisions) – or possessions broadly – and become a "more meaningful part of one's identity" (van Boven and Gilovich 2003). Indeed, some studies show that even thinking about experiential purchases evokes more positive feelings than thinking about material purchases (e.g., van Boven 2005).

Could we somehow encourage such an approach, such a focus? This brings us back to the point about paternalism (or government intervention, if you prefer). One traditional concern about such intervention is the potential for manipulation. There is also the perception that such intervention infringes on individual autonomy, on the right to make one's own choices (even if they are in error), and on individuals' preferences for the freedom to make such choices. Empirical research may cast doubt on these rationales (Blumenthal 2007a), but in any event, might governmental programming to promote *beneficial* outcomes be more palatable to the public (Huang and Blumenthal in press-a, in press-b)? What we might call "positive paternalism" or "parentalism" (Blumenthal and Huang, 2009)? Consider, for instance, governmental response to the problem of poor physical health, including obesity or coronary heart disease. A remedial paternalistic intervention might prevent fatty and other unhealthy food from being sold in restaurants, cafeterias, or even supermarkets, to remove the option to purchase and consume such unhealthy food. In contrast, government mandating of an exercise program – perhaps even just for those at risk for heart disease – might be seen as less intrusive than the "remedial" approach. Avoiding juveniles' obesity and other health problems is of substantial current interest, and one approach has been the encouragement of requiring minimum levels of physical activity in schools, with potential accountability for schools that fail to provide appropriate physical education programs (e.g., Pate et al. 2006). In this light, consider Loftus's point about implanting false memories to help dieters (Bernstein and Loftus 2009; Laney and Loftus, Chapter 6, this volume). Assume that such research is effective in changing not only perceptions but also behavior – and Laney and Loftus gave us a fairly easy, straightforward recipe – should we pursue such interventions? If so, how? Again, these are topics under hot debate in the legal and policy literature; clearly, the public's approbation of any such government intervention is an avenue for further empirical research, as is, of course, such programs' effectiveness (Blumenthal 2007a).

The bottom line is that positive emotions can clearly benefit thinking, attitudes, and behavior. Descriptively, additional research on how they do so will be vital in the legal context. Normative discussion, informed by psychologists' expertise, of whether and when to intervene foster such positive emotions, and what the role of government might be in doing so, will be just as vital. Moreover, as Forgas (Chapter 4, this volume) cautions, such research should be careful not to swing too far away from considering the potential benefits of some negative moods. Thus, likely more controversial, may be normative discussion of whether to induce *negative* moods (see Blumenthal 2007a). Psycholegal scholars' expertise in both psychology and law should benefit policy-makers in this effort.

Economic Decision-Making

Another policy-relevant field of research with rich potential involves economic decision-making. Two of many possible areas to study are consumer decisions and game theory – the sort of give-and-take, prisoner's dilemma-type games that give insight into whether people cooperate with each other.

The subprime mortgage crisis of 2008 highlighted the often-detrimental effect of cognitively- and, in particular, emotionally-biased economic decision-making. Such biases may be exacerbated when those decisions are made about something as personally salient as one's home and property. Empirical research might undertake to examine the effect of emotion on such decision-making in a number of contexts. As just one instance, further research might address the impact of affective forecasting errors and hedonic adaptation in the eminent domain context (Barros 2008; Blumenthal 2009a). As noted above, a large legal literature exists on the appropriateness of including compensation for intangible value such as sentimental attachment when just compensation for eminent domain takings is calculated. However, if homeowners are subject (like everyone else) to affective forecasting errors – that is, if they are prone to overestimating the negative emotional impact of a particular event – then perhaps such compensation is less warranted than commentators have argued. Are they? Is it? This is another area ripe for empirical research. In other research, scholars have conducted research on affective forecasting in the context of the new federal bankruptcy statutes, finding not only effects related to the anticipation of particular emotions, but also finding that the enhanced disclosure mandated by that legislation was ineffective in reducing the use of credit (Wiener et al. 2006).

Another line of research with legal and policy implications involves the impact of mood on perceptions and behavior, in both the everyday and the consumer context. In terms of perceptions, Forgas's research, noted above, shows that individuals in a good mood have more positive evaluations of property (Forgas and Ciarrochi 2001). If so, then, again, perhaps eliciting a neutral or even negative mood before having people make important judgments about property values might be appropriate. This might also be the case for everyday consumer decisions – we know advertisers try to take advantage of individuals' tendencies to process more superficially and engage in spontaneous purchases when in a positive mood; perhaps we should induce a negative mood there, too – don't go shopping when you're hungry, but also, don't go shopping when you're happy!

Finally, economists as well as legal academics are also beginning to consider emotion research. Research in game theory, and on the ultimatum game in particular, gives rise to findings with some of the most interesting implications for law and emotion research.

In the Ultimatum Game, two players are given one opportunity to split an amount of money. One player (the proposer) offers a portion of the money to the second player (the responder) and keeps the rest. The responder can either accept the offer (in which case both players split the money as proposed) or reject the offer

(in which case both players get nothing). Of course, it is thus rational for the responder to accept any offer above zero, because that way he or she receives *something*. However, relatively low Ultimatum offers – below about 20%–30% of the "pot" – are typically rejected (Harlé and Sanfey 2007). This ostensibly "irrational" behavior has been attributed to an emotional reaction to unfair treatment. For instance, Wout et al. (2006, p.566) showed that "participants experienced more emotional arousal" ["as measured by autonomic reactivity as reflected by skin conductance responses"] when confronted with an unfair offer as compared to a fair offer. Moreover, "emotional arousal was specifically related to rejections of unfair offers [that were] proposed" (see also Harlé and Sanfey 2007).

But surprisingly, an opportunity to *express the experienced emotion* qualifies these findings, and involves some of the most intriguing law and emotion findings to date. Specifically, if a responder is given the opportunity to express his emotion, even simply through writing a short note to the proposer, then that opportunity acts as a catharsis. After writing the note and "venting," people then act "rationally" and accept more offers (Xiao and Houser 2006). In other words, the cathartic emotion can lead to "rational," welfare-maximizing conduct, and can even overcome perceptions of unfairness and immoral conduct. Other recent research lends support for the important role of emotions in evaluating fairness and, more important, in enacting behavior based on those evaluations. Tabibnia et al. (2008) showed that in order for responders to accept an unfair offer, they must regulate their negative emotional reactions to the perceived unfairness. Specifically, fMRI imaging suggested that when accepting an unfair offer, areas in emotion regulation regions were activated, while neural activity in the anterior insula (associated with the experience of negative affect) decreased (Tabibnia et al. 2008). Could such cathartic and self-regulatory findings apply generally to those who perceive immoral or unfair conduct? Or to juries presented with emotional testimony? The findings have implications for distributive justice analyses; jury decision-making; research on settlement and apologies; procedural justice; and many other contexts. Further research awaits.

Moral Decision-Making

The role of emotions in such judgments of fairness – of distributional justice – highlights the developing emphasis on emotions for moral judgments more broadly. Lately there has been a move away from the traditional, Kantian/Piagetian/Kohlbergian approach to moral judgments as *cognitive*, toward a more emotion-based, Humean approach. On this view, moral decision-making *is* emotional; there is a primacy of emotional experience in moral judgments. Moral decision-making is thus emotion-driven – it is intuitive, fast, *automatic*. Jonathan Haidt (2001) and his colleagues have been most prominent in articulating this line of argument: Moral judgments, they have suggested, are like aesthetic ones – stimuli lead to instant, affect-laden feelings of moral approval or disapproval. Even more recently,

a move toward neuroscientific research has been increasingly common, identifying through fMRI studies which brain regions are activated when respondents judge moral dilemmas such as the trolley problem: Much of the debate is between social constructivists such as Haidt and moral grammarians such as Marc Hauser (2006) at Harvard. Both "camps" suggest that emotion is involved in moral decision-making or moral judgments; some of the disagreement seems to center on whether emotion precedes cognition.

Such debate, and debate over the role of emotion in moral decision-making more generally, raises at least two vital research questions for law and emotion scholars. First, what exactly is intuitive and automatic? The classic philosopher's moral dilemmas bring deontological and utilitarian principles into conflict. Might one be the more emotional, intuitive, automatic? With what implications for law?

In a series of papers psychologists John Darley, Kevin Carlsmith, and Robert Kurzban, collaborating with law professors Paul Robinson and Owen Jones (in assorted combinations and permutations) have suggested that people's intuitions about justice are widely shared, especially in the context of punishment (Carlsmith and Darley 2008; Carlsmith et al. 2002; Darley et al. 2000; Robinson et al. 2007).[5] For instance, they claim, individuals across demographics and cultures strongly prefer retributive notions of "just desert" to utilitarian notions of "deterrence" as a basis for assigning punishment (for a review of the research see Carlsmith and Darley 2008). Some neuropsychological data support this; a study by Joshua Greene, Darley, and others (Greene et al. 2001) showed that when presented with moral dilemmas, respondents who arrived at utility-based decisions had more activation in cognitive, reasoning brain areas than in emotion-based. These findings, though somewhat disputed, may suggest that moral judgments are widely shared, intuitive, automatic – and retributive.

But could the alternative be true – that utilitarian judgments are more intuitive? There is less direct evidence for that, though it is plausible: First, recall the findings that positive mood led to more utilitarian responses (Valdesolo and DeSteno 2006). Positive mood typically induces more superficial, less deeply considered thinking – to the extent that is what happened there, utilitarian judgments might be more "basic" or simple than deontological ones. Second, data from patients with brain damage to the ventromedial prefrontal cortex (VMPC) show that the conflict between emotion-based judgments and more objective, utilitarian decisions is absent: VMPC patients give more utilitarian responses to moral dilemmas (Koenigs et al. 2007). This could suggest *either* that people make the utilitarian judgment automatically, but some overcome it with an emotion-based, deontological judgment, *or* that the emotional, deontological judgment is primary, but can be overcome by utilitarian considerations (on this view, that initial response was absent in the patients, so they went directly to the second step). The study does not resolve which of these alternatives might be correct, and more research would be useful (see Young and Koenigs 2007, for a review of VMPC and moral judgment research).

[5] For slightly different results see Blumenthal (2007b).

But that raises the second important research agenda: What does that all have to do with the law? Is there really a connection between such neuron-level moral judgments and legal judgments? Historically, psychologists framed attribution processes about blame and guilt as mirroring legal concepts (e.g., Alicke 2000; Fincham and Jaspars 1980; Shaver 1985; Weiner 1995), and jury researchers certainly look to psychological models of moral judgments for insight. But to connect the fMRI research with, for instance, the research Feigenson (Chapter 3, this volume) reviewed will need an important theoretical step – how exactly does insight into automatic emotional judgments about the trolley problem, for instance, inform our understanding of how jurors will interpret a clause in a contract, or place a value on pain and suffering, never mind how they will sentence a capital offender? And how might any of those judgments be affected by group deliberation? Again, in terms of developing a theoretical framework for law and emotion, this sort of connection between emotion and different levels of analysis will be crucial.

Boundary Conditions and Individual Differences

Developing that theoretical framework is relevant to every area of law and emotion research. That is, the Symposium authors here have also shown that throughout all of this research, we will also need to articulate boundary conditions on any effects observed. In particular, *for whom* does *what* emotion influence *what judgment* about *what target* under *what circumstances*? Kerr (Chapter 4, this volume) found sex differences in heinousness judgments; Forgas (Chapter 2, this volume) showed the effects of different kinds of emotions; Lieberman (Chapter 5, this volume) noted the importance of looking at different kinds of hate crimes. Similarly, as noted throughout the Symposium articles, emotion influences judgments at different stages of the trial process. We must identify how they work, how they interact, how they guide each other and the interpretation of ongoing facts. Skovran and Wiener (2008) have begun to take such an approach, looking at the effect of *changes* in emotion over the course of a trial; Kerr's (Chapter 4, this volume) pretrial publicity study is relevant as well. Once an effect is identified, parsing its boundaries, identifying individual differences, and developing interactive models will help develop and enrich the theoretical model I have suggested we need (Mitchell 2003; cf. Rachlinski 2006).

Summary

Emotion research has been incorporated into economic analysis, into legal analysis, into policy analysis. The last decade has seen a substantial increase in the discussion of emotion-related topics by participants in the legal system. The important move now is to continue legally relevant, legally sophisticated empirical work to

continue to inform this discussion. Law and Emotion is likely the next "hot" interdisciplinary area in the law (but see Morse 2004), and this is in no small part due to the excellent work of this Symposium's authors. We can – and should – take a "moody" view of the law, building on their work and setting out potential further work, and I look forward to another 100 – or 400 – or 3,400 – years of research in Law and Emotion.

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