

ARTICLES

LAW AND SOCIAL SCIENCE IN THE TWENTY-FIRST CENTURY

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I. OVERVIEW

The use of social science—of psychology in particular—to inform legal theory and practice is fast becoming the latest craze in the pages of legal academia.¹ Books and symposia have recently been devoted to the interplay between psychology and law² and between emotions and the law,³ and to the application of other psychological and social scientific research to legal questions.⁴ An increasing number of such articles are appearing in

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¹Here, and throughout the Article, I exclude economics, though clearly a social science, from this particular claim, for two reasons. First, there is certainly no shortage of legal literature taking an economic approach to the legal system. But second, as I will discuss, a "new" thread of the use of psychology in law has been framed as a refinement of, or in the context of, or a reaction to, traditional law and economics rational choice theory. *E.g.*, Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051 (2000) (setting forth framework for a "new" perspective on legal economic analysis); Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998) (same, developing "behavioral law and economics"). *See also* BEHAVIORAL LAW AND ECONOMICS (Cass R. Sunstein ed., 2000) (presenting collection of articles seeking to apply various behavioral analyses to legal questions).

A related point was made in a recent review of the psycholegal discipline: "Among the current movements is that of 'law and economics.' While economics is a social science, the methods and fields of enquiry differ sufficiently from psychology so as no[t] to warrant discussion here." James R.P. Ogloff, *Two Steps Forward and One Step Backward: The Law and Psychology Movement(s) in the 20th Century*, 24 LAW & HUM. BEHAV. 457, 462 n.6 (2000). This may be so for traditional economics, but one thread of the current Article is to note the extent to which current behavioral law and economics is in fact making use of psychological "methods and fields of enquiry."

²Symposium, *Behavioral Economics and Labor Law*, 77 N.Y.U. L. REV. (forthcoming 2002); Symposium, *New and Critical Approaches to Law and Economics (Part I): Behavioral Economics, Law and Psychology*, 79 OR. L. REV. (2000); Symposium, *Rational Actors or Rational Fools? The Implications of Psychology for Products Liability*, 6 ROGER WILLIAMS U. L. REV. (2000); Symposium, *The Legal Implications of Psychology: Human Behavior, Behavioral Economics, and the Law*, 51 VAND. L. REV. 1497 (1998); Symposium, *Law and Psychology*, 34 CAL. W. L. REV. 1 (1997).

³*See, e.g.*, THE PASSIONS OF LAW (Susan A. Bandes ed., 1999); Symposium, *Law, Psychology, and the Emotions*, 74 CHI.-KENT L. REV. 1423 (2000); *cf.* Dan M. Kahan & Martha C. Nussbaum, *Two Conceptions of Emotion in Criminal Law*, 96 COLUM. L. REV. 269 (1996).

⁴*E.g.*, Symposium, *Is Justice Just Us? A Symposium on the Use of Social Science to Inform the Substantive Criminal Law*, 28 HOFSTRA L. REV. 601 (2000).

the legal literature; prestigious law journals, for instance, are showing an increased willingness to publish empirical work by both lawyers and psychologists.⁵

This growing trend may surprise legal academics, who tend not to have a background in, or use, statistical analysis, or who are unfamiliar with empirical data collection.⁶ This trend may also meet with some suspicion, if not scorn, from those who are familiar with such methods but who view traditional psychology and law data collection—surveys, jury simulations, etc.—as lacking reliability or external validity and as thus irrelevant.⁷ And it may shock those judges who subscribe to the view that even studies with sophisticated methodologies are mere “numerology,”⁸ “socio-scientific” or “ethico-scientific,”⁹ or simply of no value.¹⁰

The increased use of psychological findings may also surprise psychologists. They may be surprised at the legal academy’s recent increased receptivity, because of the law’s longstanding reluctance to make

⁵E.g., Stephen P. Garvey, Sheri Lynn Johnson & Paul Marcus, *Correcting Deadly Confusion: Responding to Jury Inquiries in Capital Cases*, 85 CORNELL L. REV. 627 (2000); Cass R. Sunstein, Daniel Kahneman & David Schkade, *Assessing Punitive Damages (With Notes on Cognition and Valuation in Law)*, 107 YALE L.J. 2071 (1998); Edward J. McCaffery, Daniel J. Kahneman & Matthew L. Spitzer, *Framing the Jury: Cognitive Perspectives on Pain and Suffering Awards*, 81 VA. L. REV. 1341 (1995).

There are, of course, difficulties with publishing empirical social science work in law journals. Not least among these difficulties is that “the interdisciplinary turn in legal studies has prompted professorial objections to the judgments of law review editors who, for all their raw interest, have little or no graduate training in other disciplines. Richard Posner, for instance, has recently observed that “[f]ew student editors, certainly not enough to go around, are competent to evaluate non-doctrinal scholarship.” Bernard J. Hibbits, *Last Writes? Reassessing the Law Review in the Age of Cyberspace*, 71 N.Y.U. L. REV. 615, 646 (1996) (citing Richard Posner, “The Future of the Student-Edited Law Review,” 47 STAN. L. REV. 1128, 1133–34). On the other hand, publishing empirical work in legal academia does help to address the problem discussed below of potentially over-summarized narrative reviews. See *infra* note 129 and accompanying text.

⁶See Michael J. Saks, *Legal Policy Analysis and Evaluation*, 44 AM. PSYCHOL. 1110, 1115–16 (“law students are typically smart people who do not like math”); see also Jonathan J. Koehler, *The Probity/Policy Distinction in the Statistical Evidence Debate*, 66 TULANE L. REV. 141, 148–49 (calling for increased attention to statistical issues in law school education). This is, of course, a generalization, and textbooks and other resources certainly exist for the lawyer who wishes to incorporate statistics into her analysis. E.g., MICHAEL O. FINKELSTEIN & BRUCE LEVIN, *STATISTICS FOR LAWYERS* (1990); see also REFERENCE MANUAL ON SCIENTIFIC EVIDENCE (2d ed. 2000); DAVID L. FAIGMAN, DAVID H. KAYE, MICHAEL J. SAKS & JOSEPH SANDERS, *MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY* (1997 & Supp. 2000).

⁷E.g., Martha L. Fineman & Anne Opie, *The Uses of Social Science Data in Legal Policymaking: Custody Determinations at Divorce*, 1987 WIS. L. REV. 107, 131 (suggesting that in some cases “the use of social science literature may also be inappropriate because it contains methodological flaws”).

⁸*Ballew v. Georgia*, 435 U.S. 223, 246 (1978) (Powell, J., concurring in judgment) (responding to use by majority opinion of “statistical studies” concerning the effect of jury size).

⁹*Stanford v. Kentucky*, 492 U.S. 361, 378 (1989).

¹⁰*Lockhart v. McCree*, 476 U.S. 162, 168–73 (1986). In *Lockhart*, a case concerning the effects of death-qualification on jurors’ conviction-proneness, Chief Justice Rehnquist sharply criticized social psychological literature reviewed in an *amicus* brief submitted by the American Psychological Association (“APA”). Despite assertions by the APA that the studies involved were methodologically sound, the Chief Justice discussed and dismissed each of the studies on a number of methodological grounds. *Id.* Chief Justice Rehnquist’s disparagement of the literature has since been criticized in turn by a number of scholars. E.g., J. Alexander Tanford, *The Limits of a Scientific Jurisprudence: The Supreme Court and Psychology*, 66 IND. L.J. 137, 145–47 (1990); William C. Thompson, *Death Qualification After Wainwright v. Witt and Lockhart v. McCree*, 13 LAW & HUM. BEHAV. 185 (1989); Phoebe C. Ellsworth, *Unpleasant Facts: The Supreme Court’s Response to Empirical Research on Capital Punishment*, in CHALLENGING CAPITAL PUNISHMENT: LEGAL AND SOCIAL SCIENCE APPROACHES 177 (Kenneth C. Haas & James A. Inciardi eds., 1988).

use of such research.¹¹ This receptivity, especially the characterization of recent scholarship as “new,”¹² may also surprise psychologists who have in fact been conducting such research and advocating its use in the legal system for almost a century in the United States,¹³ and as long or even longer in France,¹⁴ Germany,¹⁵ and Italy.¹⁶ Indeed, with researchers arguably motivated by the famous footnote in *Brown v. Board of Education*,¹⁷ the last three decades have seen a prolific spurt in research into the application of psychological theories and data to legal issues.¹⁸ As

¹¹Such reluctance dates back at least to the early part of this century. See John H. Wigmore, *Professor Muensterberg and the Psychology of Testimony: Being a Report of the Case of Cokestone v. Muensterberg*, 3 ILL. L. REV. 399 (1909).

¹²Jeffrey J. Rachlinski, *The “New” Law and Psychology: A Reply to Critics, Skeptics, and Cautious Supporters*, 85 CORNELL L. REV. 739 (2000); cf. Mark I. Satin, *Law and Psychology: A Movement Whose Time Has Come*, 1994 ANN. SURV. AM. L. 581 (1995). Mr. Satin’s review is somewhat confusing. He presents an interesting and quite helpful effort to systematize various types of research in psychology and law, the “Four Circles of Law and Psychology.” *Id.* at 583–84. On the other hand, he criticizes practitioners of psychology and law for failing to develop the discipline into a “movement,” for failing to “refer to each other in their writings,” or for not “organizing meetings, symposia, and journals.” *Id.* at 630–31. Yet, in his review he cites and quotes scholars publishing in *Law and Human Behavior*, the primary journal for psycholegal scholarship (including scholars discussing the discipline generally and thus citing to other practitioners), makes numerous references to the American Psychology-Law Society, the umbrella group for psycholegal scholars, and cites instances of AP-LS conferences.

Professor Rachlinski openly acknowledges that the “new” scholarship to which he refers is but a subset of an existing body of work in psychology and law, though he limits that body primarily to cognitive psychology. Rachlinski, *supra*, at 740–41. As one of the small but increasing number of academics publishing in law journals to have pursued both a J.D. and a Ph.D. in psychology, *id.* at 739 n.†, Professor Rachlinski is in an important position to contribute to the discourse in psychology and law, cf. *infra* notes 250–255. His recent work has been noteworthy in this respect. See, e.g., *id.*; Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Inside the Judicial Mind*, 86 CORNELL L. REV. 777 (2001); Jeffrey J. Rachlinski & Forest Jourden, *Remedies and the Psychology of Ownership*, 51 VAND. L. REV. 1541 (1998). I do not in any way, of course, mean to slight other joint degree holders who are also publishing—and I will not name names for fear of missing some—but it remains true that few such scholars publish primarily in law journals, rather than in legal psychology journals. Cf., Solomon M. Fulero & Douglass Mossman, *Legal Psychology and Legal Scholarship: A Review of the Reviews* 5, Poster presented at American Psychology/Law Society Conference, Redondo Beach, CA (Mar. 1998) (on file with author).

¹³HUGO MUNSTERBERG, ON THE WITNESS STAND (1908); Hugo Munsterberg, “*Yellow Psychology*,” 11 LAW NOTES 145 (1907).

¹⁴ALFRED BINET, LA SUGGESTIBILITE (1900), cited in Stephen J. Ceci & Richard D. Friedman, *The Suggestibility of Children: Scientific Research and Legal Implications*, 86 CORNELL L. REV. 33, 39–40 (2000); see also Stephen J. Ceci & Maggie Bruck, *The Suggestibility of the Child Witness: A Historical Review and Synthesis*, 113 PSYCHOL. BULL. 403 (1993) (reviewing in detail Binet’s and other late 19th-century suggestibility research).

¹⁵See Udo Undeutsch, *Highlights of the History of Forensic Psychology in Germany* 509, 509–10, in *PSYCHOLOGY AND LAW: INTERNATIONAL PERSPECTIVES* (Friedrich Lösel et al. eds., 1992).

¹⁶See Giovanni B. Traverso & Paola Manna, *Law and Psychology in Italy* 535, 535, in *PSYCHOLOGY AND LAW: INTERNATIONAL PERSPECTIVES* (Friedrich Lösel et al. eds., 1992).

¹⁷347 U.S. 483, 494 n.11 (1954) (citing psychological literature to support assertion that segregating schoolchildren by race would make Black children feel inferior and retard their educational development).

¹⁸A number of scholars have reviewed the recent history and growth of the psychology and law discipline. See, e.g., Ogloff, *supra* note 1; John C. Brigham, *What is Forensic Psychology, Anyway?*, 23 LAW & HUM. BEHAV. 273, 278 (1999) (mentioning impact of *Brown* on psychology and law); James R.P. Ogloff, Alan J. Tomkins & Donald N. Bersoff, *Education and Training in Psychology and Law/Criminal Justice: Historical Foundations, Present Structures, and Future Developments*, 23 CRIM. JUST. & BEHAV. 200 (1996); Craig Haney, *Psychology and Legal Change: The Impact of a Decade*, 17 LAW & HUM. BEHAV. 371, 375–76 (1993) (discussing growth and successes of psychology and law since the 1960s); see also LAWRENCE S. WRIGHTSMAN, JUDICIAL DECISION MAKING: IS PSYCHOLOGY RELEVANT? 135–36 (1999) (describing the dearth of research between Munsterberg’s book and the late 1970s and the rapid growth beginning then). With Ogloff, *supra* note 1, the most thorough historical

mentioned above, however, that research has only been selectively used, and has long met with hostility from commentators¹⁹ and courts, especially by the United States Supreme Court.²⁰

Moreover, during this increase in research, practitioners in both disciplines have been frustrated. Social scientists and others have viewed the legal system as underusing, misusing, or ignoring their theories and research.²¹ At the same time, the law has typically viewed social science as atheoretical,²² or as not yet having reached sufficient consensus to have anything helpful to say to the legal system.

Here, I address a number of these issues: the peculiar relationship between psychology and law;²³ traditional areas that psycholegal scholars have examined and the successes and failures in those areas; evaluation of some of the current trends of incorporating social science work into legal academia; and, especially, suggestions for how to ameliorate some of the tension between the two disciplines that has led to frustration on both “sides.”

My goal is to proffer contributions in four specific areas. First, some scholars have questioned as a preliminary matter the fit between psychology and law in particular, and law and social science more generally, because of what they have seen as nearly irreconcilable focuses or values.²⁴ In part these scholars are correct; however, there are certainly instances of psychological research having influence in the courts and legal system.²⁵ Moreover, there are persuasive ways that social scientists can conduct and present their research that will make it more relevant, more

review, though now dated in the substantive modern material it covers, is Wallace D. Loh, *Psycholegal Research: Past and Present*, 79 MICH. L. REV. 659 (1981), from which I draw below in Part II.

¹⁹See *supra* note 11 and accompanying text.

²⁰See Haney, *supra* note 18, at 376–78 (reviewing “failures” of psychology and law to influence Supreme Court majority opinions); Tanford, *supra* note 10, at 144–50.

²¹THE USE/MISUSE/NONUSE OF APPLIED SOCIAL RESEARCH IN THE COURTS (Michael J. Saks & Charles Baron eds., 1980); Tanford, *supra* note 10, at 142–43 (noting the “explosion” of applied psychological research since 1970 but the failure of the Supreme Court to utilize that research); David L. Faigman, *The Law’s Scientific Revolution: Reflections and Ruminations on The Law’s Use of Experts in Year Seven of the Revolution*, 57 WASH. & LEE L. REV. 661, 682 (2000) (“[L]aw reviews have been teeming with articles on the law and science connection, and there have been more than a few symposia ... on the subject. But much that has been written has not been well informed by the scientific method. Many law professors are science neophytes and their scholarship reflects their limited background in the subject.”).

²²See *infra* notes 228 & 273 and accompanying text; Tanina Rostain, *Educating Homo Economicus: Cautionary Notes on the New Behavioral Law and Economics Movement*, 34 LAW & SOC’Y REV. 973, 1002 (2000) (“empirical social science knowledge cannot provide a big all-purpose theory”).

²³Donald N. Bersoff, *Psychologists and the Judicial System: Broader Perspectives*, 10 LAW & HUM. BEHAV. 151, 155 (1986) (“[I]f that relationship [between psychologists and the legal system] were to be examined by a Freudian, the analyst would no doubt conclude that it is a highly neurotic, conflict-ridden ambivalent affair. (I stress affair because it is certainly no marriage.)”).

²⁴See e.g., Brigham, *supra* note 18, at 281–85 (discussing the “different cultures” of law and psychology); Donald N. Bersoff, *Social Science Data and the Supreme Court: Lockhart as a Case in Point*, 42 AM. PSYCHOL. 52, 55 (1987); Tanford, *supra* note 10, at 168 (suggesting a “fundamental incompatibility between psychology and the Supreme Court’s jurisprudence of trials”); Craig Haney, *Psychology and Legal Change: On the Limits of a Factual Jurisprudence*, 4 LAW & HUM. BEHAV. 147, 159–68 (1980) (noting several points where values and goals of psychology and law differ).

²⁵See Charles R. Tremper, *Sanguinity and Disillusionment Where Law Meets Social Science*, 11 LAW & HUM. BEHAV. 267, 268 (1987).

palatable, more convincing, and more applicable to the legal system. Thus, one important contribution in the paper is identifying and illustrating these modes of research. It is a harder task than most social scientists think to have research successfully incorporated into legal literature, legal reform, or legal analysis, and in many cases this difficulty is justifiable. The difficulty is due in part to social scientists' lack of familiarity with specifics of legal doctrine and in part to a perception by lawyers that social science knowledge is preliminary, sketchy, or inconsistent. It is due in part to an analogous lack of familiarity by legal academics with methods of and knowledge in the social sciences, and in part to limited research topics addressed by social scientists. The goal of this article is to illustrate each of these problems with existing interdisciplinary work and the ways in which it has been used, and to make concrete suggestions as to how they might be resolved.

A second contribution is an evaluation and critique of legal academics' use of psychology and social science, especially in the context of the recent embracing of (1) cognitive psychology, prospect theory, and "framing"²⁶ research in the context of the developing literature on behavioral law and economics, and (2) research on the emotions.²⁷ Each could benefit from more critical thinking and more familiarity with research methods and actual data and research. In turn, however, I note specific problems in the other direction, in which social scientists misunderstand legal doctrine or provide research that is in fact unhelpful in resolving the particular legal problem they sought to address.

Third, I identify a number of specific ways in which communication between social scientists and legal academics can be fostered and improved. The focus is first on the way research is conceptualized and conducted, both by legal and social science academics, and second on the way empirical researchers present such research to those who might use it. Thus, because some of the tensions identified involve lack of familiarity with the other discipline's literature and methodology, some of the suggestions are geared toward developing knowledge in both fields. Because some involve misunderstanding of statistical issues, I point out areas in which both researchers and those interpreting the research should use caution. And because some tensions involve how research is presented both in academia and in court, I discuss in detail procedures that have developed in the social sciences for the accumulation and presentation of existing bodies of research.

Finally, I pick up some of the points made throughout, and suggest that despite my optimism that social science research can be conducted well on relevant legal issues, and can be presented relevantly and helpfully to courts and the legal academy, and that those throughout the legal system

²⁶McCaffery et al., *supra* note 5, at 1345.

²⁷E.g., Eric A. Posner, *Law and the Emotions*, 89 GEO. L.J. 1977 (2001); Kahan & Nussbaum, *supra* note 3; THE PASSIONS OF LAW, *supra* note 3.

can help evaluate what good social science is and how to use it²⁸—despite such optimism, there are nevertheless problems that potentially severely restrict the application of social science to the legal system. Specifying the grounds for a guarded optimism, then, is the fourth contribution of this Article.

A specific roadmap for the paper follows. Section II traces in part the background of psychology and law as a discipline, using it as a more general example of the law and social science interface.²⁹ I also examine some of the topics scholars in the field have investigated, seeking to identify some of their successes and failures. The section continues with a brief discussion of where psychology and law is now as a discipline, including calls from inside the field for reform and for a focus on nontraditional research. Understanding these perspectives—both law’s perceptions of the discipline and the discipline’s own—can help identify tensions that illustrate why law has been hesitant to embrace reform through social scientific data (or to use such data at all).

Section III then points out that despite the legal system’s past hesitation, and despite concerns about social science theory and research, legal academics have nevertheless lately co-opted psychology and law. I focus on two areas in particular: the increased use of research in cognitive psychology on biases and heuristics in decision-making by practitioners of “behavioral law and economics”³⁰ and an increased focus by legal scholars on the role of the emotions. These areas illustrate some of the concerns about lawyers’ use of psychology and its application to law, ranging from a lack of familiarity with the literature in question, to overbroad expectations regarding the social scientific literature,³¹ to outright incorrect characterizations of a discipline’s state of knowledge.

In turn, however, there are substantial difficulties in the ways in which social scientists have conducted and presented the research with which they seek to influence the legal system. These difficulties include: (1) inflated expectations of the role of social science in the legal process; (2) too narrow a focus on specific research issues that, though arguably tractable

²⁸Cf. Faigman, *supra* note 21, at 670 (quoting Justice Stephen Breyer as asking “What is good psychology, and how can courts recognize it?”).

²⁹My focus on psychology and law stems from familiarity with that field relative to some other “law and” disciplines, and from the recent move by legal academics to incorporate various subdisciplines of psychology—social or cognitive—into legal analyses. Many of the substantive points and remedies I suggest, however, apply equally well to empirical research in other social science disciplines. See JOHN MONAHAN & LAURENS WALKER, *SOCIAL SCIENCE IN LAW: CASES AND MATERIALS* 34 (3d ed. 1994) (“It is important not to take distinctions among the social sciences too seriously, for the degree of overlap among them is great.... Often, distinctions among the social sciences are purely arbitrary.”); see also Charles W. Collier, *Interdisciplinary Legal Scholarship in Search of a Paradigm*, 42 *DUKE L.J.* 840 (1993) (suggesting that most “law-and-” disciplines still suffer from fundamental theoretical and methodological problems).

³⁰See sources cited *supra* note 1.

³¹See Rostain, *supra* note 22, at 975, 1002 (suggesting that behavioral law and economics proponents promise too much from empirical social science). For a thorough recent review of the tensions between the two disciplines, focusing on establishing a framework for what the legal system might reasonably expect from the existing empirical work and on developing further suggestions, see Gregory Mitchell, *Taking Behaviorism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law*, 43 *WM. & MARY L. REV.* 1907 (2002).

from a researcher's point of view, are nevertheless atypical in the legal system; and (3) failure to consider other factors that the legal system privileges in making its decisions.

After identifying potential sources of miscommunication and tension between the two disciplines, in Section IV I make additional suggestions for altering the ways in which social scientists conduct research and present it to the legal system. Many of these suggestions are methodological, because, despite some of the substantive critiques, it is often the case that the procedures by which research is conducted, and the form in which it is presented, can and should make substantial differences in the law's receptivity. Some of these basic suggestions can improve how social science research is perceived and used in the law. Nevertheless, there are still concerns and limitations that constrain such use, concerns that may in fact raise differences between social science and the law that are difficult to surmount. Section V closes with a discussion of some of these concerns. Finally, Section VI reviews my discussion and closes with optimism about the present and future of law and social science in the twenty-first century.

II. LAW AND PSYCHOLOGY: BACKGROUND AND REVIEW

A. BEGINNINGS

The conventional history of psychology and law traces the field's origins to Harvard psychology professor Hugo Munsterberg's *On the Witness Stand* (1908), a book-length collection of articles he had earlier published in the popular press.³² Although certainly a convenient starting point, caveats are in order. First, as alluded to above, such a focus is on *American* psychology and law—the application of behavioral and empirical research, both from the burgeoning field of psychology and from other fields, had been conducted for several years prior in Europe.³³ Hans Gross had published several books applying behavioral, psychological, and forensic theory and findings to the investigative and trial processes.³⁴ Alfred Binet had conducted studies demonstrating and examining the suggestibility of children.³⁵ And earlier, of course, Jeremy Bentham had proposed a classic behavioral analysis of criminal law, the notion of deterrence.³⁶ Moreover, in the early days of American psychology and law,

³²MUNSTERBERG, *supra* note 13.

³³See *supra* notes 13–16 and accompanying text.

³⁴E.g., HANS GROSS, CRIMINAL PSYCHOLOGY: A MANUAL FOR JUDGES, PRACTITIONERS, AND STUDENTS (1911); HANS GROSS, CRIMINAL INVESTIGATION 277 (1950). Dr. Gross's psychological assertions, especially those dealing with women and their questionable capacity as witnesses, have since been little heeded. Cf. Terrence F. Kiely, *The Houses of Deceits: Science, Forensic Science, and Evidence: An Introduction to Forensic Evidence*, 35 LAND & WATER L. REV. 397, 414 n.39 (2000). His discussion of forensic evidence, fingerprint evidence in particular, was nevertheless influential. See *id.*

³⁵BINET, *supra* note 14.

³⁶JEREMY BENTHAM, THE PRINCIPLES OF MORALS AND LEGISLATION (New York, Hafner Publishing Co. 1948) (1823).

much of the published research merely reported European empirical work.³⁷

Second, Munsterberg's popular writings had previously drawn the ire of attorney Charles C. Moore, who published a brief but scathing criticism of one of Munsterberg's articles.³⁸ Moore deprecated the use of the expert witnesses whose testimony about human perception and epistemology Munsterberg advocated. He criticized not only Munsterberg's writing, but also his empirical research, his knowledge of the law, and his disdain for judges' and juries' "common sense."³⁹ Moore's fundamental point was that Munsterberg's psychological findings and suggestions in fact proposed nothing new, and thus "[o]n almost every topic that has a proximate and practical relation to the trustworthiness of testimony delivered in court, the judges have the psychologists 'beaten a mile' [sic]."⁴⁰

Juxtaposing Moore's review with Munsterberg's response a month later⁴¹ is at least amusing by today's standards, but it also serves to emphasize a fascinating, if ironic, point. Moore was a frequent contributor to *Law Notes*;⁴² indeed, one of his own substantive articles appeared immediately following Munsterberg's response.⁴³ These articles were fundamentally psychological in nature. In addition to "Number of Persons or Objects," Moore had earlier that year published "Estimates of Distance,"⁴⁴ both discussing common perceptual biases or mistakes and, in the latter case, explicitly drawing on at least one psychological journal article. Primarily, though, Moore canvassed legal opinions, rather than psychology journals, in order to find statements such as "in the excitement of the moment [witnesses] might have misjudged or easily mistaken the distance the car traveled."⁴⁵ Thus, despite Moore's strong attack on Munsterberg, it seems that this vein of criticism was less directed at the effort to incorporate *any* psychological research into trial practice, and more at the assumption that the particular research in question supplied something new and helpful to lawyers, judges, or juries. Both the tendency to privilege descriptions or summaries of empirical work from the legal literature over primary reports, as well as the idea that psychology proposed little more than "common sense," would resurface in the future.

³⁷Loh, *supra* note 18, at 661 ("Most of the work [in the United States] merely described or replicated the European studies."). In addition to Munsterberg's reports, psychologist Guy Montrose Whipple provided published reports of German and other research in American psychological journals. *E.g.*, Guy M. Whipple, *The Psychology of Testimony*, 8 PSYCHOL. BULL. 307 (1911); Guy Montrose Whipple, *Recent Literature on the Psychology of Testimony*, 7 PSYCHOL. BULL. 365 (1910). Indeed, the fact that most of the research was foreign was to play a large part in undercutting many of Munsterberg's claims. *See* Wigmore, *supra* note 11, at 410 (noting that most of the work relied upon by Munsterberg was published in European journals).

³⁸Charles C. Moore, *Yellow Psychology*, 11 LAW NOTES 125 (1907) (discussing Munsterberg's 1907 article "Nothing But the Truth" in *McClure's Magazine*).

³⁹*Id.* at 125-27.

⁴⁰*Id.* at 125.

⁴¹*See* Munsterberg, *Yellow Psychology*, *supra* note 13.

⁴²Virginia G. Drachman, *Women Lawyers and the Quest for Professional Identity in Late Nineteenth-Century America*, 88 MICH. L. REV. 2414, 2438 (1990).

⁴³Charles C. Moore, *Number of Persons or Objects*, 11 LAW NOTES 146 (1907).

⁴⁴Charles C. Moore, *Estimates of Distance*, 11 LAW NOTES 5 (1907).

⁴⁵*Id.* at 6 (quoting *Beers v. Metropolitan St. Ry. Co.*, 84 N.Y.S. 785, 787 (N.Y. App. Div. 1903)).

Despite, or perhaps due to,⁴⁶ such controversy, Munsterberg proceeded to publish his newspaper and magazine articles collectively as *On the Witness Stand*. In it, he lambasted the legal community for failing to heed the existing knowledge that psychologists had uncovered. Clearly influenced by, and perhaps responding to, Moore's criticisms, Munsterberg argued that:

The time for . . . Applied Psychology is surely near The lawyer alone is obdurate.

The lawyer and the judge and the juryman are sure that they do not need the experimental psychologist. . . . They go on thinking that their legal instinct and their common sense supplies them with all that is needed and somewhat more.⁴⁷

Similarly, he was “astonish[ed] that the work of justice is carried out in the courts without ever consulting the psychologist and asking him for all the aid which the modern study of suggestion can offer.”⁴⁸

The same traditional history immediately moves to an influential 1909 article in the *Illinois Law Review* by John Henry Wigmore, reviewing and responding to Munsterberg's book.⁴⁹ Wigmore presented his critique as a transcript from a libel trial against Munsterberg on behalf of the legal field: *Cokestone v. Muensterberg*. At once tongue-in-cheek and vitriolic, Wigmore's critique primarily took the form of a cross-examination of “Muensterberg” on a number of claims Wigmore attributed to him.⁵⁰ He elicited in this testimony admissions, among others, that (1) the scientific literature on which Munsterberg relied was primarily published in European psychology journals written in German, French, or Italian;⁵¹ (2) psychological literature published in English did not present any material on psycholegal research;⁵² (3) the state of knowledge in this psychological literature was far from conclusive;⁵³ (4) even some of those psychologists whom Munsterberg cited, such as William Stern, had noted that psychology had not yet proceeded to a point where it would be helpful to the law,⁵⁴ and

⁴⁶ Brigham, *supra* note 18, at 276–77 & tbl.2, gives examples of Munsterberg's “pugnacious, somewhat sensationalized” claims.

⁴⁷MUNSTERBERG, *ON THE WITNESS STAND*, *supra* note 13, at 9–11.

⁴⁸*Id.* at 194. Munsterberg's writings seem to have influenced contemporaneous fiction as well—detective fiction in particular—despite the criticism by Moore and Wigmore. Mystery writers in the first decade of the twentieth century had their detectives make use of galvanometers, plethysmographs, and especially word-association tasks, in unmasking evildoers. *E.g.*, EDWIN BALMER & WILLIAM MACHARG, *THE ACHIEVEMENTS OF LUTHER TRANT* (1910); Arthur B. Reeve, *The Scientific Cracksmen*, in *THE SILENT BULLET* 34 (1910). In their Foreword, Balmer and MacHarg echoed Munsterberg's words: “The hour is close at hand when [the results of the ‘new psychology’] will be used not merely in the determination of guilt and innocence, but to establish in the courts the credibility of witnesses and the impartiality of jurors.” BALMER & MACHARG, *supra*, at foreword.

⁴⁹Wigmore, *supra* note 11.

⁵⁰*Id.* at 401 (listing the elements of the “complaint”).

⁵¹*Id.* at 411, 416.

⁵²*See id.* at 416.

⁵³*See id.* at 424–26.

⁵⁴*See id.* at 414–15, 423.

(5) where empirical research existed, it often addressed a legally irrelevant question.⁵⁵

Wigmore's rebuff was compelling, though perhaps unfair in two narrow ways. First, of course, it is always easy to discredit an opponent's answers when you yourself are writing those replies. Second, there were in fact scattered instances of relevant writing on the psychology of testimony in both legal and psychological journals, though hardly to the extent that readers of Munsterberg would have thought.⁵⁶ In any case, Wigmore convinced most of the academic community that Munsterberg's—and, by extension, psychology's—claims regarding the law were extravagant and unfounded. As a result, outside of Whipple's yearly reviews of the European research on testimony,⁵⁷ for several years American psychologists “left the law rather severely alone.”⁵⁸

The “Brandeis brief,” a brief submitted to the U.S. Supreme Court in *Muller v. Oregon*⁵⁹ by then-attorney Louis Brandeis at about the same time as Munsterberg's book appeared, is usually cited as another early beginning to the law-social science relationship.⁶⁰ In *Muller*, an Oregon laundry owner was fined ten dollars for violating a state statute that prevented women from working in factories or laundries more than ten hours a day.⁶¹ Using the same argument that had recently succeeded in *Lochner v. New York*,⁶² the owner challenged the statute.

Defending the statute, Oregon hired Brandeis, whose brief in the Supreme Court—“something entirely new”⁶³ in legal practice—collated examples of U.S. and foreign legislation supporting the State's position, as well as “extracts from over ninety reports of committees, bureaus of statistics, commissioners of hygiene, inspectors of factories, both in this country and in Europe, to the effect that long hours of labor are dangerous for women.”⁶⁴ Unlike Munsterberg's citations, however, these sociological data do not appear to have been based on empirical work and, arguably,

⁵⁵See *id.* at 426–27 (existing experiments could not show that any errors in testimony in fact influenced an actual verdict).

⁵⁶E.g., Joseph E. Brand & G.M. Stratton, *From the University of California Psychological Laboratory: The Effect of Verbal Suggestion Upon the Estimation of Linear Magnitudes*, 12 PSYCHOL. REV. 41, 45–47 (1905) (noting suggestibility of observers); F. Beecher, *Evidence Versus Psychology*, 24 CAN. L. TIMES 195, 200 (1904) (arguing for a law of evidence “in accordance with the laws of modern psychology”). At about the same time, Roscoe Pound was arguing strongly for a new legal and judicial approach, which he called “sociological jurisprudence.” See David R. Dow, *The Relevance of Legal Scholarship: Reflections on Judge Kozinski's Musings*, 37 HOUS. L. REV. 329, 335 & n.28 (2000) (citing Pound's articles in the *Harvard Law Review* calling for this approach); Ogloff, *supra* note 1, at 459–60 (noting rise of sociological jurisprudence).

⁵⁷See *supra* note 37.

⁵⁸Loh, *supra* note 18, at 663 (quoting Hutchins, *The Law and the Psychologists*, 16 YALE REV. 678 (1927)).

⁵⁹208 U.S. 412 (1908).

⁶⁰See, e.g., WRIGHTSMAN, *supra* note 18, at 126; Donald N. Bersoff & David J. Glass, *The Not-So Weisman: The Supreme Court's Continuing Misuse of Social Science Research*, 2 U. CHI. L. SCH. ROUNDTABLE 279, 279 n.2 (1995).

⁶¹*Muller*, 208 U.S. at 417.

⁶²198 U.S. 45 (1905).

⁶³Dow, *supra* note 56, at 334.

⁶⁴*Muller*, 208 U.S. at 419 n.1. Two pages of Brandeis's brief were devoted to legal argument; one hundred and ten were devoted to such “extracts.” Dow, *supra* note 56, at 334.

represented “evidence that no respected psychologist would consider as social science.”⁶⁵ Indeed, *Muller* seems more an instance of a resourceful attorney bringing to bear any information he can in a case, rather than a formal or unified movement by a social science discipline to influence the law. The case is, however, an excellent early example of the Court using extralegal data to ground its decision—though at the same time, perhaps, illustrating the lack of discrimination in using social science data for which it would be roundly criticized later in the century.

B. THE “DEAD PERIOD”

Reviewers refer to the ensuing few decades as a “dead period” in psychological research as applicable to law.⁶⁶ Again, this is perhaps an overstatement. Sparked in large part by the legal realist movement, there were certainly efforts by legal academics to use psychological principles to reform the law.⁶⁷ In these decades, books such as *Law and the Social Sciences*⁶⁸ and *Law and the Lawyers*⁶⁹ championed the use of scientific psychology and sociology to refine legal concepts. Based on the belief that “every important legal problem is at bottom a psychological problem,”⁷⁰ these lawyers advocated “scientizing” the law. The purposes were at least two-fold: first, to ground in empirical theory the legal realist assumption that judicial opinions reflected their authors’ personal opinions, formed and molded by educational, social, and environmental sources.⁷¹ Second, notwithstanding Wigmore’s arguments, they sought to incorporate what empirical work existed into the legal system, especially the trial process—much like present-day trial handbooks, these texts sought to demonstrate “in a practical way the psychological factors involved in the practice of law.”⁷²

In addition, articles appeared in legal journals, seeking to identify the behavioral and cognitive assumptions upon which the law based its rules.

⁶⁵Bersoff & Glass, *supra* note 60, at 279 n.2.

⁶⁶Gary L. Wells & Elizabeth F. Loftus, *Eyewitness Research: Then and Now*, in EYEWITNESS TESTIMONY: PSYCHOLOGICAL PERSPECTIVES 1, 6 (Gary L. Wells & Elizabeth F. Loftus eds., 1984) (citation omitted). Professor Ogloff suggests that the 1940s and 1950s saw the “wilting” of the psycholegal movement, and that by about 1950, “law and psychology seemed to have been forgotten.” Ogloff, *supra* note 1, at 462–63.

⁶⁷See Loh, *supra* note 18, at 663; Ogloff, *supra* note 1, at 461–62. Professor Schlegel has detailed efforts at this time by academics in the legal realist school to incorporate empirical theory and method from sociology and psychology into legal thinking. JOHN HENRY SCHLEGEL, AMERICAN LEGAL REALISM & EMPIRICAL SOCIAL SCIENCE (1995) (reviewing efforts by legal realist academics in the 1920s and 1930s to ground legal reasoning in empirical social science); See also Dan Simon, *A Psychological Model of Judicial Decision Making*, 30 RUTGERS L. REV. 1, 3–7 (1998) (discussing calls by legal realism scholars in the 1930s for more psychological grounding of theories of judicial decision making).

⁶⁸H. CAIRNS, LAW AND THE SOCIAL SCIENCES (1935).

⁶⁹EDWARD ROBINSON, LAW AND THE LAWYERS (1935).

⁷⁰*Id.* at 51.

⁷¹See, e.g., JEROME FRANK, COURTS ON TRIAL: MYTH AND REALITY IN AMERICAN JUSTICE 147–48 (1949); see also JEROME FRANK, LAW AND THE MODERN MIND (1930). A recent review of the behavioral law and economics research analogized it again to the legal realist movement. Daniel A. Farber, *Toward A New Legal Realism*, 68 U. CHI. L. REV. 279 (2001) (reviewing BEHAVIORAL LAW AND ECONOMICS, *supra* note 1).

⁷²Loh, *supra* note 18, at 664 (quoting D. MCCARTY, PSYCHOLOGY FOR THE LAWYER iii (1929)).

The best-known of these articles were the products of collaborations between a lawyer and a psychologist from Yale University, Robert Hutchins and Donald Slesinger, respectively, who were focusing on the rules of evidence.⁷³ Their goal was to lay the groundwork for direct empirical testing of such assumptions, with consequent reform if experimentation did not support them.⁷⁴ Hutchins and Slesinger also published in one of the leading psychological journals of the time, presenting their approach to psychologists who were, presumably, eager to have their knowledge disseminated in an applied field.⁷⁵ And that knowledge was hardly as scanty as in Munsterberg's time: scores of research articles had been published in American psychology and criminology journals between Wigmore's critique and the appearance of the books in the 1930s, even solely on the psychology of testimony.⁷⁶

Contemporaries lauded Hutchins and Slesinger's work, though it had little practical impact on evidentiary rules.⁷⁷ Apart, perhaps, from residual hostility to empirical work, its lack of influence may have been due to methodological concerns about the research upon which they relied. Two criticisms in particular have been levied: first, that the research "consisted . . . of untested generalizations . . . about human behavior (which were no more unimpeachable than the commonsense assumptions they sought to replace),"⁷⁸ second, that because the experiments were not originally designed to address the specific evidentiary questions Hutchins and Slesinger sought to apply them to, the results should not be extrapolated to the courtroom.⁷⁹ Like Charles Moore's objections about common sense, this latter criticism would return to haunt advocates of empirical research.⁸⁰

Even apart from the legal realist movement, the 1930s and 1940s saw increasing calls for the utilization of psychology and its methods in the law. In the context of obscenity trials, for instance, some judges considered "the expert opinions of psychologists and sociologists . . . helpful if not necessary," and in the absence of expert testimony from such academics,

⁷³See Robert Hutchins & Donald Slesinger, *Some Observations on the Law of Evidence—Consciousness of Guilt*, 77 U. PA. L. REV. 725 (1929); Robert Hutchins & Donald Slesinger, *Some Observations on the Law of Evidence—The Competency of Witnesses*, 37 YALE L.J. 1017 (1928); Robert Hutchins & Donald Slesinger, *Some Observations on the Law of Evidence—Spontaneous Exclamations*, 28 COLUM. L. REV. 432 (1928).

⁷⁴Robert Hutchins & Donald Slesinger, *Legal Psychology*, 36 PSYCHOL. REV. 13, 13 (1929).

⁷⁵*Id.*

⁷⁶In addition to the reviews by Whipple, *supra* note 37, see, e.g., William M. Marston, *Studies in Testimony*, 15 J. CRIM. L. & CRIMINOLOGY 5 (1924) (comparing testimony under free narrative, direct examination, and cross-examination); H.M. Cady, *On the Psychology of Testimony*, 35 AM. J. PSYCHOL. 110 (1924); William M. Marston, *Psychological Possibilities in the Deception Tests*, 11 J. CRIM. L. & CRIMINOLOGY 551 (1921) (advocating use of blood pressure measurement during testimony as indicator of deception); William M. Marston, *Systolic Blood Pressure Symptoms of Deception*, 2 J. EXPERIMENTAL PSYCHOL. 117 (1917) (same).

⁷⁷Loh, *supra* note 18, at 667.

⁷⁸*Id.*; cf. Paul E. Meehl, *Law and the Fireside Inductions: Some Reflections of a Clinical Psychologist*, in LAW, JUSTICE, AND THE INDIVIDUAL IN SOCIETY: PSYCHOLOGICAL AND LEGAL ISSUES 10, 11 (June Louin Tapp & Felice J. Levine eds., 1977) (noting that both lawyers and social scientists use "fireside inductions," commonsense generalizations about behavior).

⁷⁹Loh, *supra* note 18, at 667.

⁸⁰See, e.g., Chief Justice Rehnquist's analysis of the empirical research in *Lockhart v. McCree*, discussed *supra* note 10.

took judicial notice in one case of psychology and sociology textbooks regarding perceptions of sexuality, nudity, and obscenity.⁸¹ Further, some commentators have suggested that the practice of presenting extralegal evidence, such as “Brandeis Briefs,” in courts began in the late 1930s and became increasingly common during this period.⁸²

In the context of academia, following the approach taken by William M. Marston lauding the use of various polygraph devices,⁸³ Fred Inbau advocated the use of the “Keeler polygraph” in detecting deception, and reported its use in at least one court case.⁸⁴ Psychology was seen as the best treatment for certain criminal “classes.”⁸⁵ Jury simulation began to develop as an empirical tool, examining (much as do modern jury studies) the phases through which mock jurors proceed as they arrive at their final decision.⁸⁶ Interestingly, such simulations found results quite similar to today’s, with mock jurors (undergraduates or law students) often forming decisions before the close of evidence, later evidence being typically viewed in light of earlier evidence,⁸⁷ and the timing or placement of evidence often influencing its perceived weight.⁸⁸ Finally, there were recurring calls for certain decisions to be taken from the jury (and even from judges) and placed in the hands of experts. This was occasionally so regarding cases involving children or child witnesses,⁸⁹ but more typically concerned insanity, responsibility, and other clinical or psychiatric issues. The goal was to leave such decisions to clinical experts.⁹⁰

C. TAKING ROOT

The 1950s and 1960s saw two important developing paths in which the growth of more modern social science and law is rooted. First, perhaps as

⁸¹*Parmellee v. United States*, 113 F.2d 729, 732–34 (D.C. Cir. 1940). Other courts later objected to such use of expert testimony in obscenity cases. *E.g.*, *Klaw v. Schaffer*, 151 F. Supp. 534 (S.D.N.Y. 1957).

⁸²Thomas L. Hafemeister & Gary B. Melton, *The Impact of Social Science Research on the Judiciary*, in *REFORMING THE LAW: IMPACT OF CHILD DEVELOPMENT RESEARCH* 27, 29 (Gary G. Melton ed., 1987).

⁸³*See supra* note 76.

⁸⁴FRED E. INBAU, *LIE DETECTION AND CRIMINAL INVESTIGATION* (1942); Fred E. Inbau, *Detection of Deception Technique Admitted as Evidence*, 26 J. CRIM. L. & CRIMINOLOGY 262 (1935).

⁸⁵RAYMOND MOLEY, *OUR CRIMINAL COURTS* (1930) (advocating the use of psychiatry and psychology in treatment of offenders).

⁸⁶*E.g.*, H.P. Weld & E.R. Danzig, *A Study of the Way in Which a Verdict Is Reached by a Jury*, 53 AM. J. PSYCHOL. 518 (1940); H.P. Weld & Merrill Roff, *A Study in the Formation of Opinion Based upon Legal Evidence*, 51 AM. J. PSYCHOL. 609 (1938).

⁸⁷*Cf.* Nancy Pennington & Reid Hastie, *Explaining the Evidence: Tests of the Story Model for Juror Decision Making*, 62 J. PERSONALITY & SOC. PSYCHOL. 189 (1992) (noting the tendency for jurors to interpret evidence both in light of previously held conceptions and consistent with “stories” that they develop as testimony is adduced).

⁸⁸*See* Weld & Danzig, *supra* note 86; Weld & Roff, *supra* note 86. Another important finding of Weld and Danzig was the tendency for substantial individual differences to be present among respondents. *Cf. infra* notes 213–224.

⁸⁹*E.g.*, CLAUD MULLINS, *CRIME AND PSYCHOLOGY* (1943).

⁹⁰*E.g.*, H.E. Eisler, *The Place of the Social Scientist in the Juridical Process*, 23 PSYCHIATRIC Q. SUPP. 300 (1949) (stating that decisions about the treatment of offenders should be left to those trained in psychiatry, psychology, sociology, and law); G.H. Stevenson, *Insanity as a Criminal Defence: The Psychiatric Viewpoint*, 58 CAN. MED. ASS’N J. 174 (1948) (suggesting that the question of sanity be submitted by the judge to a technical board).

a result of such calls in the literature for clinical and psychiatric expert panels (though no direct connection has been traced), courts began to sanction the admission of expert testimony by clinical psychologists.⁹¹ According to one reviewer, literature on the role and responsibilities of the psychiatric or psychological expert witness “suddenly mushroomed” during this period.⁹² At the same time, literature and case law⁹³ grew regarding the definition of insanity and the standards to be used in determining who was insane. Both trends likely reflect the increased reliance, beginning in the 1950s, on efforts to rehabilitate offenders rather than punish.⁹⁴

Second, social science increasingly began to be seen as a means of attacking, rather than simply supporting, the legal and especially the political status quo.⁹⁵ In particular, the perceived success⁹⁶ of social science evidence being included in the noted 1954 *Brown* desegregation case⁹⁷ apparently motivated social scientists of all stripes to begin research relevant to social issues and public and legal reform. There was, however, immediate and direct criticism from the legal community, raising another important theme that illustrates the law/social science tension. Professor Edmond Cahn, for instance, sharply attacked the methodology of the social science studies cited in *Brown*, fairly accurately pointing out their shortcomings.⁹⁸ Others, reflecting Wigmore’s early criticisms, considered

⁹¹*E.g.*, *Hidden v. Mutual Life Ins. Co.*, 217 F.2d 818, 821 (4th Cir. 1954) (holding that exclusion of clinical psychologist’s expert testimony was improper, where tests he used were “recognized as helpful by medical experts in psychiatry” and where the “expert testimony played so large a part in the trial of the case”).

⁹²Loh, *supra* note 18, at 672.

⁹³*E.g.*, *Durham v. United States*, 214 F.2d 862 (D.C. Cir. 1954). Notably, critics of the *Durham* test focused on the argument that the vagueness of the terms used in its definition of insanity would leave too much discretion to mental health experts and take that discretion away from the jury. *See, e.g.*, Norman J. Finkel, *Culpability and Commonsense Justice: Lessons Learned Betwixt Murder and Madness*, 10 NOTRE DAME J.L. ETHICS & PUB. POL’Y 11, 33 (1996) (discussing *Durham* and other tests).

⁹⁴Charles J. Ogletree, Jr., *The Death of Discretion? Reflections on the Federal Sentencing Guidelines*, 101 HARV. L. REV. 1938, 1941 (1988) (“During the 1950’s, the predominant judicial philosophy of punishment, as well as the prevailing view of penologists, favored the concepts of deterrence and rehabilitation over the concepts of retribution and incapacitation.”) (citation omitted).

⁹⁵Hafemeister & Melton, *supra* note 82, at 29. Recall that the “Brandeis Brief,” while ostensibly protecting women’s rights, was defending an arguably paternalistic statute. *See, e.g.*, James A. Thomson, *Swimming in the Air: Melville W. Fuller and the Supreme Court 1888–1910*, 27 CUMB. L. REV. 139, 190–94 (1996–1997) (discussing *Muller*).

⁹⁶The degree to which the empirical research in *Brown* was in fact influential has been long debated. *E.g.*, Alan J. Tomkins & Kevin Oursland, *Social and Social Scientific Perspective in Judicial Interpretations of the Constitution: A Historical View and an Overview*, 15 LAW & HUM. BEHAV. 101 (1991) (discussing the case and the Justices’ use of the social science research). Given the strong efforts by Chief Justice Warren to form a unanimous coalition and ground the decision in constitutional law, the footnote has at times simply been considered “window dressing” to satisfy the social scientists who had worked so hard for the plaintiffs. RICHARD KLUGER, *SIMPLE JUSTICE: THE HISTORY OF BROWN V. BOARD OF EDUCATION AND BLACK AMERICA’S STRUGGLE FOR EQUALITY* (1975); Brigham, *supra* note 18, at 278 (noting the term “window dressing”). WRIGHTSMAN, *supra* note 18, at 136–40, gives a brief but quite useful review of the relevant studies and the ensuing debate.

⁹⁷347 U.S. 483, 494 n.11 (1954).

⁹⁸Edmond Cahn, *Jurisprudence*, 30 N.Y.U. L. REV. 150, 161–65 (1955). Bersoff and Glass, *supra* note 60, have noted that:

Perhaps the two most often cited criticisms of the Clarks’ study are that: (1) Prof. Clark himself conducted the interviews with the children who participated in the doll studies, a methodological flaw that can guide, if not bias, both responses and results; and (2) the Clarks failed to indicate that northern Black children not subjected to segregation responded

the studies as indicating no more than “common sense.”⁹⁹ But Professor Cahn had an important additional point, one rarely considered in examining the interplay between law and social science. He “would not have the constitutional rights of Negroes—or of other Americans—rest on any such flimsy foundation as some of the scientific demonstrations in these records.”¹⁰⁰ The criticism suggests two cautions: first, care in using empirical data—data that at best are subject to revision based on the newest study¹⁰¹ and at worst rest on shoddy scientific grounds—in addressing issues of constitutional magnitude;¹⁰² and second, care to keep in mind that regardless of the methodological sophistication of such empirical work, other factors are often relevant or at work in deciding a case.¹⁰³

Regardless of the debate over the success of *Brown*’s Footnote Eleven, however, and regardless of criticism such as Professor Cahn’s, social scientists certainly began to see their fields and their empirical work as socially relevant in the 1960s and 1970s.¹⁰⁴ Sociologists and political scientists, as well as psychologists, began investigating such legal issues as jury decision-making¹⁰⁵ or the impact of rulings on school prayer in more

to the black and white dolls, in the main, in the same ways as segregated southern Black children.

Id. at 294 n.109.

On the first criticism, which raises the specter of experimenter-induced bias, see generally D. Michael Risenger, Michael J. Saks, William C. Thompson & Robert Rosenthal, *The Daubert/Kumho Implications of Observer Effects in Forensic Science: Hidden Problems of Expectation and Suggestion*, 90 CAL. L. REV. 1 (2002) (discussing experimenter biases and expectancy effects).

⁹⁹Charles L. Black, Jr., *The Lawfulness of the Segregation Decisions*, 69 YALE L.J. 421, 428 (1960); see also Ernest van den Haag, *Social Science Testimony in the Desegregation Cases: A Reply to Professor Kenneth Clark*, 6 VILLANOVA L. REV. 69 (1960).

¹⁰⁰Cahn, *supra* note 98, at 157.

¹⁰¹David L. Faigman, *To Have and Have Not: Assessing the Value of Social Science to the Law and Science and Policy*, 38 EMORY L.J. 1005, 1042 (1989) (“[T]he concern arises that explicit reliance on social science research might lead to the undercutting of some legal rules if subsequent studies contradict the earlier studies first used to establish the rule.”). Professor Faigman points out, however, that this argument assumes that different results do not in fact indicate changing attitudes, beliefs, or conditions, rather than flawed research. *Id.* See also Laurens Walker & John Monahan, *Social Facts: Scientific Methodology as Legal Precedent*, 76 CAL. L. REV. 877 (1988) (suggesting that data should not be used as precedent, but that methodology might).

¹⁰²See, e.g., *Missouri v. Jenkins*, 515 U.S. 97, 119–20 (1995) (“Such assumptions [about the necessity of remedial programs] and any social science research upon which they rely certainly cannot form the basis upon which we decide matters of constitutional principle.”); *Craig v. Boren*, 429 U.S. 190, 204 (1976) (Brennan, J.) (suggesting that “proving broad sociological propositions by statistics is...in tension with the normative philosophy that underlies the Equal Protection Clause”). But see Tomkins & Oursland, *supra* note 96 (suggesting that social and social scientific knowledge is often used in such cases, in the sense that the cases reflect the knowledge that has filtered into society’s consciousness).

¹⁰³I discuss both of these cautions in more detail in Part IV, *infra*.

¹⁰⁴Ogloff, *supra* note 1, at 464 (“the momentum of the movement was rekindled in the 1960s”); Dennis R. Fox, *Psycholegal Scholarship’s Contribution to False Consciousness About Injustice*, 23 LAW & HUM. BEHAV. 9, 9 (1999) (“The field of psychology and law began its organizational existence amid the political protest of the late 1960’s.”); but see Loh, *supra* note 18, at 676 (suggesting that the “Cahn-Clark exchange chilled further enthusiasm by psychologists for research on law for about a decade”).

¹⁰⁵In sociology, see, e.g., Fred L. Strodbeck, Rita M. James & Charles Hawkins, *Social Status in Jury Deliberations*, 22 AM. SOC. REV. 713, 715 (1957) (finding, *inter alia*, different participation rates on juries between men and women). The paramount social-psychological study of juries in this period was the Chicago Jury Project. See HARRY KALVEN & HANS ZEISEL, *THE AMERICAN JURY* (1966). The Project included over 1,500 interviews with jurors from approximately 200 different criminal trials.

detail.¹⁰⁶ The American Psychology-Law Society was founded in the late 1960s and began a research journal, *Law and Human Behavior*, in 1977.¹⁰⁷ With a slightly more sociological orientation, the Law and Society Association, founded in 1964, began publishing interdisciplinary social scientific research on the law even earlier, in 1966, in the *Law and Society Review*. And, as outlined below, the next decades saw an “explosion” in empirical research on legal issues,¹⁰⁸ along, however, with frustration with the narrow research areas in which that explosion was contained.

D. OUTBURSTS AND OUTBURSTS

Since the 1970s social science, psychology in particular, has indeed seen an explosion or outburst in its application to the legal system. In addition to *Law and Human Behavior*, journals such as *Behavioral Sciences and the Law* and *Law and Psychology Review* were founded, focusing on empirical work on legal issues. Expert testimony on psychological and psychiatric issues became more accepted in court,¹⁰⁹ though that happened slowly and not without controversy. The use of various psychological syndromes became increasingly common—some have argued too common¹¹⁰—as defenses to criminal charges. The methodological sophistication of empirical studies, in most cases, improved dramatically, as did the sheer number of articles in those journals¹¹¹ (and, slowly, in law journals as well¹¹²). Arguably, the developing bodies of interdisciplinary psycho-legal and socio-legal research have had some effect on judicial decision-making.¹¹³ The following two examples of such research illustrate those developing research trends, as well as additional recent tensions between law and social science.

1. Eyewitness Research

First, one of the strongest catalysts for the developing incorporation of social science research into the law has been research on eyewitness testimony. This long line of empirical research, begun by the testimony studies of Munsterberg and others discussed above, took off in the 1970s,

¹⁰⁶See WILLIAM K. MUIR, JR., PRAYER IN THE PUBLIC SCHOOLS: LAW AND ATTITUDE CHANGE (1967).

¹⁰⁷Brigham, *supra* note 18, at 278.

¹⁰⁸Michael J. Saks, *On Tapp (and Levine)*, 77 MICH. L. REV. 892, 897 (1979) (reviewing LAW, JUSTICE, AND THE INDIVIDUAL IN SOCIETY, *supra* note 78).

¹⁰⁹E.g., Wayne T. Westling, *The Case for Expert Witness Assistance to the Jury in Eyewitness Identification Cases*, 71 OREGON L. REV. 93, 94 (1992) (“Courts have gradually accepted the use of expert [eyewitness] testimony.”).

¹¹⁰See generally ALAN M. DERSHOWITZ, THE ABUSE EXCUSE (1994) (noting the increased, in his opinion unjustified and lamentable, use of syndrome excuses).

¹¹¹See James R.P. Ogloff, *Law and Human Behavior: Reflecting Back and Looking Forward*, 23 LAW & HUM. BEHAV. 1, 1 (1999) (noting that over 500 articles had been published in twenty years of *Law and Human Behavior*).

¹¹²See *supra* note 5 and accompanying text.

¹¹³See John Monahan & Laurens Walker, *Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law*, 134 U. PA. L. REV. 477, 477 n.2 (1986) (asserting that as of 1986, each of the nine Supreme Court Justices had “either authored or joined opinions using social science research to establish or criticize a rule of law”); see also Tremper, *supra* note 25.

prompted especially by the work of Elizabeth Loftus.¹¹⁴ Professor Loftus noted the distinct stages at which information is stored and retrieved, dividing these stages into encoding, storage, and retrieval. She emphasized that unlike the classic conception of memory as a video camera that faithfully reproduces any incoming data, external influences at any of these stages can taint the accuracy of the recollection. For instance, stress at the time of perception or encoding can cause a witness to wrongly encode a situation;¹¹⁵ suggestive questions or questioning tactics can bias the retrieval of existing memories. In a classic study, she showed a film clip of a car accident to subjects and asked them to report the speed of the cars involved.¹¹⁶ Some subjects were asked how fast the cars were going when they “bumped,” while others were asked the cars’ speeds when they “crashed.” Despite seeing the identical film, subjects in the “crashed” condition reported significantly higher speeds than in the “bumped” condition.

Replicated repeatedly since the early 1970s, such demonstration of the fallibility of eyewitnesses nevertheless received short shrift from the courts. The primary hesitancy about accepting expert evidence concerning eyewitness testimony was that it would invade the province of the jury—whose “common sense” would allow it to properly evaluate eyewitness accounts.¹¹⁷ Moreover, courts presumed that a defendant’s opportunity to cross-examine an eyewitness obviated the need for any expert testimony.¹¹⁸ This hesitancy lasted some time, and is present even today;¹¹⁹ however, the recent trend is increasingly to allow such expert testimony on factors that might influence an eyewitness’s perceptions and testimony.¹²⁰ The trend may be due to better methodologies, to case law broadening the admissibility of expert evidence,¹²¹ or perhaps to studies suggesting that expert testimony in fact aids jurors’ evaluations of eyewitness reports.¹²²

The last theme raised by the eyewitness testimony debates was brought up in the early 1980s. In an important exchange between Michael

¹¹⁴See generally ELIZABETH F. LOFTUS, *EYEWITNESS TESTIMONY* (1979); ELIZABETH F. LOFTUS & JAMES M. DOYLE, *EYEWITNESS TESTIMONY: CIVIL AND CRIMINAL* (1987).

¹¹⁵LOFTUS & DOYLE, *supra* note 114, at 26–27.

¹¹⁶Elizabeth F. Loftus & John C. Palmer, *Reconstruction of Automobile Destruction: An Example of the Interaction Between Language and Memory*, 13 J. VERBAL LEARNING & VERBAL BEHAV. 585 (1974).

¹¹⁷See e.g., *United States v. Hall*, 165 F.3d 1095 (7th Cir. 1999) (affirming trial court’s exclusion of expert testimony because it “addresses an issue of which the jury already generally is aware”); *State v. McClendon*, 248 Conn. 572 (1999) (the “general principles” to which expert would have testified “should come as no surprise to the average juror”). See generally Gregory G. Sarno, Annotation, *Admissibility, at Criminal Prosecution, of Expert Testimony on Reliability of Eyewitness Testimony*, 46 A.L.R. 4th 1047 § 3[a] (Supp. 2000) (collecting cases).

¹¹⁸E.g., *State v. Kemp*, 507 A.2d 1387 (Conn. 1986).

¹¹⁹E.g., *United States v. Smith*, 156 F.3d 1046, 1052–54 (10th Cir. 1998); *State v. Coley*, 32 S.W.3d 831, 837 (Tenn. 2000).

¹²⁰New York, for instance, recently ruled that expert testimony on eyewitness reliability is no longer per se inadmissible, but is a matter for the trial court’s discretion. See *People v. Lee*, 750 N.E. 2d 63, 67 (N.Y. 2001) (abolishing per se inadmissibility rule, though noting that trial court there did not abuse its discretion to exclude such testimony).

¹²¹E.g., *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

¹²²E.g., Brian J. Cutler, Hedy R. Dexter & Steven D. Penrod, *Expert Testimony and Jury Decision Making: An Empirical Analysis*, 7 BEHAV. SCI. & L. 215, 223 (1989).

McCloskey and Howard Egeth and Loftus,¹²³ McCloskey and Egeth attacked the state of eyewitness research, criticizing the methods, the inferences, and the legal relevance of the research.¹²⁴ Importantly, they raised the question of whether the state of knowledge at the time was adequate to present to the legal community, much as Wigmore had seventy-five years earlier. Where once Loftus had suggested that the reason the law was hesitant was simply the “unavailability of published summaries of research for the legal community,”¹²⁵ she now persuasively argued that the knowledge was certainly adequate, and given the importance of preventing wrongful convictions, was essential, to convey such findings to the legal profession.¹²⁶ McCloskey and Egeth’s criticism has been periodically renewed, both with respect to eyewitness testimony¹²⁷ and to other areas,¹²⁸ and points out the importance of presenting research in legal, not just social scientific, journals in a form both easily understood by legal academics, lawyers, and judges, and coherently summarized, but without losing essential information in the “translation.”¹²⁹ In Section IV(B) below, one important way this can be done successfully is outlined.

2. Jury Research

The second important example of modern interdisciplinary work is perhaps the most common: examining the jury.¹³⁰ Despite the fact that fewer than ten percent of all cases actually reach trial, with jury or not,¹³¹ the lion’s share of empirical research in the 1980s and 1990s has indeed

¹²³See Robert J. Hallisey, *Experts on Eyewitness Testimony in Court—A Short Historical Perspective*, 39 HOW. L.J. 237, 247–51 (1995) (reviewing and discussing the debate).

¹²⁴Michael McCloskey & Howard Egeth, *Eyewitness Identification—What Can a Psychologist Tell a Jury?*, 38 AM. PSYCHOL. 550 (1983).

¹²⁵Loh, *supra* note 18, at 685.

¹²⁶Elizabeth F. Loftus, *Silence Is Not Golden*, 38 AM. PSYCHOL. 564 (1983).

¹²⁷Rogers Elliott, *Expert Testimony About Eyewitness Identification: A Critique*, 17 LAW & HUM. BEHAV. 423 (1993).

¹²⁸Compare Phoebe C. Ellsworth, *To Tell What We Know or Wait for Godot?*, 15 LAW & HUM. BEHAV. 77 (1991) (advocating the use of amicus briefs despite developing and ongoing social science research, as scientific searches for knowledge are never complete), with Rogers Elliott, “*To Tell What We Know or Wait for Godot?*”: *Response*, 15 LAW & HUM. BEHAV. 91 (1991) (suggesting caution in the use of such briefs and outlining criteria for their use).

¹²⁹See Jeremy A. Blumenthal, *The Reasonable Woman Standard: A Meta-Analytic Review of Gender Differences in Perceptions of Sexual Harassment*, 22 LAW & HUM. BEHAV. 33, 51 n.6 (1998) (“For a number of reasons, a law review article simply carries more weight in judicial decisions than what is viewed as the supplementary citation of a social science article, despite the possibility for data and conclusions to be misconstrued when presented in narrative, summarized form. Courts’ receptivity to social science knowledge may be increasing, but enthusiasm for this fact should be tempered by scrutiny of the ways in which it is used.”).

¹³⁰For a dated review of jury work, see James H. Davis, Robert M. Bray & Robert W. Holt, *The Empirical Study of Decision Processes in Juries: A Critical Review*, in LAW, JUSTICE, AND THE INDIVIDUAL IN SOCIETY, *supra* note 78, at 326. For more recent reviews, see INSIDE THE JUROR: THE PSYCHOLOGY OF JUROR DECISION MAKING (Reid Hastie ed., 1993); REID HASTIE, STEVEN D. PENROD & NANCY PENNINGTON, INSIDE THE JURY (1983). For a good recent overview of methodological issues in jury research, see Michael J. Saks, *What Do Jury Experiments Tell Us about How Juries (Should) Make Decisions?*, 6 S. CAL. INTERDISC. L.J. 1 (1997).

¹³¹See David A. Harris, *The Appearance of Justice: Court TV, Conventional Television, And Public Understanding of the Criminal Justice System* 35 ARIZ. L. REV. 785, 821–22 & nn.275–76 (1993) (noting that between six and eight percent of criminal cases go to trial).

focused on juries.¹³² And an enormous range of topics in jury decision making has been addressed: the effect of jury size on deliberation and decision quality;¹³³ racial¹³⁴ or other demographic¹³⁵ factors that might influence jury decisions; the timing of when at trial jurors form their opinions;¹³⁶ how, whether, and when juries exercise their power to nullify the law;¹³⁷ the effect of defining “reasonable doubt”,¹³⁸ how well jurors in fact understand legal instructions, and what might be done to improve comprehension;¹³⁹ jury evaluation of compensatory¹⁴⁰ and punitive¹⁴¹ damages; and the influence of judges’ nonverbal behavior on jurors’ judgments,¹⁴² to name just a few. Such jury research has been presented to the courts in capital punishment cases¹⁴³ and cases involving pretrial publicity.¹⁴⁴

In many instances, however, the presentation of such research was less than wholeheartedly embraced. Courts’ and commentators’ most oft-voiced objection to the relevance of jury research has been the lack of generalizability or external validity, i.e., the complaint that the *simulation* nature of the jury studies obviated any practical use.¹⁴⁵ For instance, in

¹³²See Ogloff, *supra* note 111, at 2–3 (noting that at least 40% of articles published in *Law and Human Behavior* focused on “jury decision making”).

¹³³See, e.g., Adam M. Chud & Michael L. Berman, *Six-Member Juries: Does Size Really Matter?*, 67 TENN. L. REV. 743 (2000) (reviewing research); Michael J. Saks & Mollie Weighner Marti, *A Meta-Analysis of the Effects of Jury Size*, 21 LAW & HUM. BEHAV. 451 (1997) (quantitatively reviewing and assessing research).

¹³⁴E.g., William J. Bowers, Benjamin D. Steiner & Marla Sandys, *Death Sentencing in Black and White: An Empirical Analysis of the Role of Jurors’ Race and Jury Racial Composition*, 3 U. PA. J. CONST. L. 171 (2001). A number of empirical studies have investigated such issues. See *id.* at 181–89 (collecting studies); Cynthia K.Y. Lee, *Race and the Victim: An Examination of Capital Sentencing and Guilt Attribution Studies*, 73 CHI.-KENT L. REV. 533, 542–48 (1998) (reviewing such studies).

¹³⁵See, e.g., Reid Hastie, *Is Attorney-Conducted Voir Dire an Effective Procedure for the Selection of Impartial Juries?*, 40 AM. U. L. REV. 703, 707 (1991) (reviewing mock juror studies on influence of demographics on verdict).

¹³⁶E.g., Paula L. Hannaford, Valerie P. Hans, Nicole L. Mott & G. Thomas Munsterman, *The Timing of Opinion Formation by Jurors in Civil Cases: An Empirical Examination*, 67 TENN. L. REV. 627 (2000).

¹³⁷E.g., NORMAN J. FINKEL, COMMONSENSE JUSTICE: JURORS’ NOTIONS OF THE LAW (1995); Keith E. Niedermeier, Irwin A. Horowitz & Norbert L. Kerr, *Informing Jurors of Their Nullification Power: A Route to a Just Verdict or Judicial Chaos?* 23 LAW & HUM. BEHAV. 331 (1999); Richard L. Wiener, Kristen Habert, Gina Shkrodriani & Caryn Staebler, *The Social Psychology of Jury Nullification: Predicting When Jurors Disobey the Law*, 21 J. APPLIED SOC. PSYCHOL. 1379 (1991).

¹³⁸E.g., Chantal Mees Koch & Dennis J. Devine, *Effects of Reasonable Doubt Definition and Inclusion of a Lesser Charge on Jury Verdicts*, 23 LAW & HUM. BEHAV. 653 (1999).

¹³⁹E.g., Joel D. Lieberman & Bruce D. Sales, *What Social Science Teaches Us about the Jury Instruction Process*, 3 PSYCHOL., PUB. POL’Y, & L. 589 (1997).

¹⁴⁰E.g., Michelle Chernikoff Anderson & Robert J. MacCoun, *Goal Conflict in Juror Assessments of Compensatory and Punitive Damages*, 23 LAW & HUM. BEHAV. 313 (1999).

¹⁴¹E.g., *id.*; Reid Hastie, David A. Schkade & John W. Payne, *A Study of Juror and Jury Judgments in Civil Cases: Deciding Liability for Punitive Damages*, 22 LAW & HUM. BEHAV. 287 (1998).

¹⁴²E.g., Peter David Blanck, Robert Rosenthal & La Doris Hazzard Cordell, *The Appearance of Justice: Judges’ Verbal and Nonverbal Behavior in Criminal Jury Trials*, 38 STAN. L. REV. 89 (1985).

¹⁴³See Ellsworth, *supra* note 10.

¹⁴⁴See John S. Carroll, Norbert L. Kerr, James J. Alfini, Frances M. Weaver, Robert J. MacCoun & Valerie Feldman, *Free Press and Fair Trial: The Role of Behavioral Research*, 10 LAW & HUM. BEHAV. 187 (1986).

¹⁴⁵See, e.g., Lockhart v. McCree, 476 U.S. 162, 168–73 (1986). For early such criticisms by commentators, see Robert M. Bray & Norbert L. Kerr, *Methodological Considerations in the Study of the Psychology of the Courtroom*, in THE PSYCHOLOGY OF THE COURTROOM 287 (Norbert L. Kerr & Robert M. Bray eds., 1982); Shari Seidman Diamond, Introduction, *Simulation: Does the Microscope*

Free v. Peters,¹⁴⁶ Judge Posner criticized an empirical study by Hans Zeisel, a profoundly influential legal sociologist, that James Free, Jr., had submitted to demonstrate that the capital sentencing instructions heard by the jury that had sentenced him to death were so confusing as to be constitutionally defective. Professor Zeisel had given people dismissed from jury selection a questionnaire summarizing the evidence at Free's trial, giving the instructions the jury had heard or similar ones, and presenting several true or false questions.¹⁴⁷ The participants got few of the questions correct, leading the district court judge to suppose that the instructions had in fact been confusing.¹⁴⁸ Judge Posner, without commenting on the results, nevertheless rejected the study as fatally flawed, in part because of a "lack of comparability between the test setting and the setting of the sentencing hearing"¹⁴⁹—a perceived lack of external validity.

A lack of external validity can certainly be a problem, as Professor King has noted:

Researchers conducting mock trial studies, for instance, may fail to compare predeliberation and postdeliberation preferences or otherwise to account for the effect of deliberations, fail to give mock jurors standard jury instructions, use exclusively undergraduate students as mock jurors, limit the time mock jurors deliberate, substitute transcripts or tapes for live testimony, or make little attempt to create a sense of real-world consequence for the mock jurors whose responses they test. [Even so, little] agreement exists about whether or how much these methodological deficiencies skew results.¹⁵⁰

For a number of reasons, however, there is much to be said for continuing jury simulation research, especially if more generalizable subject samples are recruited. First, even those who have critiqued simulation studies are encouraged by the increasing methodological sophistication that such work has begun to reflect.¹⁵¹ Second, recent evidence gives at least limited support to the idea that there are in fact few significant differences between undergraduate samples and those using

Lens Distort?, 3 LAW & HUM. BEHAV. 1 (1979); Kathleen Carrese Gerbasi, Miron Zuckerman & Harry T. Reis, *Justice Needs a New Blindfold: A Review of Mock Jury Research*, 84 PSYCHOL. BULL. 323 (1977). More recently, see Nancy J. King, *Postconviction Review of Jury Discrimination: Measuring the Effects of Juror Race on Jury Decisions*, 92 MICH. L. REV. 63, 75–77 (1993) (discussing methodological issues in jury simulation research).

¹⁴⁶12 F.3d 700 (7th Cir. 1993) (Posner, J.).

¹⁴⁷*Id.* at 705.

¹⁴⁸*Id.*

¹⁴⁹*Id.* Typifying such criticism, Judge Posner argued that:

There is little a priori reason to think that the results of such an examination offer insight into the ability of a real jury, which has spent days or weeks becoming familiar with the case and has had the benefit of oral presentations by witnesses, lawyers, and judges, and which renders a verdict after discussion rather than in the isolation of an examination setting.

Id. at 705–06.

¹⁵⁰See King, *supra* note 145, at 75 n.43.

¹⁵¹See, e.g., Shari Seidman Diamond, *Illuminations and Shadows from Jury Simulations*, 21 LAW & HUM. BEHAV. 561 (1997). *But cf.* Brian H. Bornstein, *The Ecological Validity of Jury Simulations: Is the Jury Still Out?*, 23 LAW & HUM. BEHAV. 75, 88 (1999) ("although simulations have not become more realistic over time, it may not matter much").

non-university samples.¹⁵² Third, there may sometimes be advantages to using undergraduates as subject samples. As mentioned above, some mock jury research, especially in the context of capital sentencing, has focused on mock jurors' comprehension of judicial sentencing instructions (e.g., regarding the use of mitigating circumstances).¹⁵³ The use of undergraduates in this case might in fact be useful; for example, if it can be persuasively demonstrated that students at an elite institution poorly understand judicial instructions, a plausible inference exists that a wider sample of society would likely understand them even less.¹⁵⁴ Finally, Professor Laurens Walker has extended the notion of simulation. In a perhaps underappreciated article, he has advocated, at least in the context of civil procedure, the application of experimental design in actual cases, i.e., experimenting with cases on a court's docket to identify potential effects in the real world.¹⁵⁵ Professor Walker notes examples where such research has been conducted, and rebuts potential legal objections. Over the last five years, some such research has in fact been put into practice.¹⁵⁶

Despite the increased potential use for mock and other jury studies, there has been recurring dissatisfaction, repeated "outbursts" of frustration, within the academic psycholegal community about researchers' apparent obsession with such studies. As alluded to above, almost every reviewer of the discipline has noted a "myopic focus of much of the work in the field"—a focus on eyewitness testimony and jury decision-making.¹⁵⁷ On the one hand, Loh has suggested that at least part of this focus may be justified:

Although only a minority of cases go to trial and fewer yet are heard by a jury, the ideal of using lay members to find facts, to interpose the conscience of the community, and to legitimate official action is part of the foundation of our system of justice. Much of procedural law can only be understood in relation to, and in the context of, the institution of the jury. On the one hand, jurors are regarded as "the nerve center of the fact-finding process." On the other, there has been a historical distrust in the judgment of amateurs who are untutored in legal subtleties and inexperienced in evaluating evidence. Consequently, an elaborate web of procedural rules has evolved to shield the jury at each phase of the fact-

¹⁵²Bornstein, *supra* note 151, at 88.

¹⁵³See, e.g., James Luginbuhl, *Comprehension of Judges' Instructions in the Penalty Phase of a Capital Trial: Focus on Mitigating Circumstances*, 16 LAW & HUM. BEHAV. 203 (1992). In this study Professor Luginbuhl recruited adults from jury lists, so the criticism is not specifically applicable.

¹⁵⁴Cf. Kimball R. Anderson & Bruce R. Braun, *The Legal Legacy of John Wayne Gacy: The Irrebuttable Presumption That Juries Understand and Follow Jury Instructions*, 78 MARQ. L. REV. 791, 793 (1995) (reviewing comprehension studies and noting that most use undergraduates; nevertheless the studies tend to show poor comprehension).

¹⁵⁵See Laurens Walker, *Perfecting Federal Civil Rules: A Proposal for Restricted Field Experiments*, 51 LAW & CONTEMP. PROBS. 67, 75-77 (1988). See also Linda S. Mullenix, *Discovery in Disarray: The Pervasive Myth of Pervasive Discovery Abuse and the Consequences for Unfounded Rulemaking*, 46 STAN. L. REV. 1393 (1994).

¹⁵⁶See, e.g., Hannaford, et al., *supra* note 136 (reviewing data collected from actual juries in Arizona); Valerie P. Hans, Paula L. Hannaford & G. Thomas Munsterman, *The Arizona Jury Reform Permitting Civil Jury Trial Discussions: The Views of Trial Participants, Judges, and Jurors*, 32 U. MICH. J.L. REFORM 349 (1999) (discussing background of Arizona Jury Reform project).

¹⁵⁷Ogloff, *supra* note 111, at 1.

finding process from extraneous influences that might bias its decision. Nevertheless the jury remains the hub that holds together the spokes of procedural justice. Directly or indirectly, the jury provides the backdrop for empirical study of the criminal process.¹⁵⁸

On the other hand, of course, the legal system does not solely consist of “the criminal process,” or even the criminal or civil trial. Settlement negotiations, plea bargains, the mental health of attorneys, and a variety of other topics can, and should, be profitably examined empirically. Indeed, “[t]here really is no limit to the scope of inquiry available to legal psychologists. . . . [T]o the extent that *every* law has as its purpose the control or regulation of human behavior, every law is ripe for psychological study.”¹⁵⁹

E. SUMMARY

In the foregoing section I had two aims. First, I sought to briefly sketch a history of psycholegal research in somewhat more detail than does the traditional account. Second, using that history as a springboard, I sought to identify several recurring themes that have led, and continue to lead, to miscommunication and misunderstanding between social scientists and legal academics, and to a reluctance and even scorn toward empirical social science on the part of some in the legal system. These themes included:

1. The perception that social science only offers *common sense* findings; that lawyers, jurors, and judges are capable of intuiting what social scientists find through experimentation;
2. The suggestion that social scientists, typically due to ignorance, fail to address legally relevant questions;
3. The perception that social scientific research is generally unavailable to lawyers;
4. The suggestion that existing research is inconsistent with and unready for presentation to, or use by, the law; and
5. Dissatisfaction within the discipline of psychology with the subject matter of empirical research conducted, including the perception that whatever research has already been done, regardless of the methodological sophistication, addresses too narrow a range of topics.

Each of these tensions, in fact, can be addressed and remedied, and one goal of this article is to identify some such remedies.¹⁶⁰ For instance, Professor Saks and others have repeatedly demonstrated data that contravene “common sense” assumptions.¹⁶¹ More thorough training can

¹⁵⁸Loh, *supra* note 18, at 678–79 (footnotes omitted).

¹⁵⁹Ogloff, *supra* note 111, at 2–3 (emphasis in original; citation omitted).

¹⁶⁰See *infra* Section IV.

¹⁶¹Professor Saks, in his review of Tapp and Levine’s 1977 book, nicely illustrated this point. He presented a list of putative findings from various book chapters, and suggested that none was surprising; they all conformed to “common sense.” He then pointed out, however, that the actual findings from the chapters were precisely the opposite from those he described. See Saks, *supra* note 108, at 895. See

address the ignorance concern.¹⁶² Informed use of computerized databases such as Westlaw or PsycINFO can easily improve lawyers' and judges' access to empirical research, as can the publication of such research in legal journals. Through improved methodological practices in the way research is conducted, summarized, and presented, existing research in most social scientific areas can be persuasively, or at least relevantly, presented to those in the legal system.¹⁶³ Finally, through education and training in legal theory and doctrine, social scientists can turn to "non-traditional" areas of research that can identify important questions, not only for how interdisciplinary work itself is conducted, but also for numerous aspects of legal reform.¹⁶⁴

III. "YOU JUST DON'T UNDERSTAND":¹⁶⁵ INTERDISCIPLINARY COMMUNICATION PROBLEMS

A. LAWYERS' USE OF SOCIAL SCIENCE

Both within and without social science disciplines, tension, disagreement, and disappointment have often met the exercise and presentation of empirical research designed to influence or reform the legal system. Despite all this, recent years have seen a substantial increase in legal academics' incorporation of social science research into their published work.¹⁶⁶ In particular, legal writing on the role of emotions in the law and on using findings from cognitive psychology to criticize the assumptions underlying traditional law and economics modeling has burgeoned rapidly in the last several years.¹⁶⁷ It is not necessarily clear what has driven this move—recognition of the value of interdisciplinary work; a stronger focus within legal academia on such work;¹⁶⁸ an increase

also, Jeremy A. Blumenthal, *A Wipe of the Hands, A Lick of the Lips: The Validity of Demeanor Evidence in Assessing Witness Credibility*, 72 NEB. L. REV. 1157 (1993) (reviewing findings that "common sense" assumptions of indicators of deception—shifting gaze or blinking—in fact were poor predictors).

¹⁶²See *infra* notes 260–264 and accompanying text.

¹⁶³See *infra* Section IV(B).

¹⁶⁴Fully outlining such non-traditional areas is beyond the scope of this Article. For an initial effort, see Jeremy A. Blumenthal, *Broadening the Scope of Psycholegal Research: Lessons from the First-Year Law Curriculum*, Paper presented at American Psychology/Law Society Conference, Austin, Tex. (Mar. 2002). See *also* sources cited *infra* note 226.

¹⁶⁵DEBORAH TANNEN, *YOU JUST DON'T UNDERSTAND: WOMEN AND MEN IN CONVERSATION* (1990).

¹⁶⁶See *supra* note 5.

¹⁶⁷See *supra* notes 3 and 5. Another area of legal scholarship related to social science that has seen increased attention is norm theory. *E.g.*, ERIC A. POSNER, *LAW AND SOCIAL NORMS* (2000); Symposium, *The Legal Construction of Norms*, 86 VA. L. REV. 1577 (2000); Symposium, *Law, Economics, and Norms*, 144 U. PA. L. REV. 1643 (1996). Note, though, that the recent legal approach to norms reverses the traditional psychological view. In the latter, norms can influence individual behavior, at times eliciting arguably "irrational" behavior. See generally Dale T. Miller & Deborah A. Prentice, *The Construction of Social Norms and Standards*, in *SOCIAL PSYCHOLOGY: HANDBOOK OF BASIC PRINCIPLES* 799 (Edward Tory Higgins & Arie W. Kruglanski eds., 1996). In the former this perspective is reversed: norms allegedly arise from the rational behavior of individuals. POSNER, *supra*, at 7–8.

¹⁶⁸There is at least some perception that a move toward interdisciplinary work of some sort (whether combining doctrine and practice or doctrine and research in some other substantive discipline) is often important in qualifying for tenure, for retaining respect among colleagues, for promotion, and

in social scientists' success in bringing their work to the attention of the legal academy; an increase in joint degrees by law school professors;¹⁶⁹ a perception that "contemplating the law by itself is pretty boring";¹⁷⁰ or, perhaps, in the case of cognitive psychology and its reframing as "behavioral law and economics" (BLE),¹⁷¹ a reaction to conventional law and economics which, according to some of its founders, is arguably "stagnating."¹⁷²

To social scientists who see the legal system as holding fundamentally incorrect assumptions about human behavior, increased attention to their research would seem to be a blessing. Not surprisingly, however, this blessing is disguised. At least in the areas where psychological data are used the most now—behavioral law and economics and law and the emotions—there are in fact serious concerns about lawyers' use of psychological findings and their application of such findings to legal theory and to policy. Most of these problems can be subsumed under one category—*lack of knowledge* or *familiarity* with the social science literature they seek to apply to the law. This section illustrates some instances of recent legal literature that fall prey to such unfamiliarity, and why, other than simple inaccuracy,¹⁷³ it can be such a problem for the interdisciplinary work.¹⁷⁴ In turn, however, social scientists are often equally ignorant about fundamental legal issues that render their research difficult for the law to apply, if not irrelevant.

1. *Law and Emotions*

Susan Bandes and Eric Posner, accomplished legal scholars, have recently turned their attention to the role of the emotions in the substantive law (LE).¹⁷⁵ Professor Bandes has edited a fascinating book collecting

for acquiring research funding. See Harry T. Edwards, *The Growing Disjunction Between Legal Education and the Legal Profession: A Postscript*, 91 MICH. L. REV. 2191, 2203–05 (1993).

¹⁶⁹Michael Heise, *The Importance of Being Empirical*, 26 PEPP. L. REV. 807, 810 (1999) (noting increase).

¹⁷⁰Jonathan R. Macey, *Law and the Social Sciences*, 21 HARV. J.L. & PUB. POL'Y 171, 171 (1997).

¹⁷¹See sources cited *supra* note 1.

¹⁷²See, e.g., Douglas G. Baird, *The Future of Law and Economics: Looking Forward*, 64 U. CHI. L. REV. 1129, 1161 (1997) (roundtable discussion, remarks of Professor Gary Becker).

¹⁷³In a discussion of interdisciplinary work in law reviews published in 1994 and 1995, Fulero and Mossman note:

In some cases, references were actually incorrect. For example, Piaget was referred to in one article as a "French" psychologist, rather than as Swiss. In another, a reference to DSM-III in the footnote simply said "Get full term for DSM III from Fischer article," something that the author had clearly failed to do. In a third, the Bulletin of the American Academy of Psychiatry and Law was referred to as the Bulletin of the American Academy of "Psychology" and Law.

Fulero & Mossman, *supra* note 12, at 6.

¹⁷⁴Although the fields of BLE and law and emotions are rapidly expanding, I discuss them below only in such detail as will illustrate my points. A fuller treatment is beyond the scope of this Article.

¹⁷⁵Others have as well. E.g., Kahan & Nussbaum, *supra* note 3; Peter H. Huang, *Reasons Within Passions: Emotions and Intentions in Property Rights Bargaining*, 79 OR. L. REV. 435 (2000); Owen D. Jones, *Law, Emotions, and Behavioral Biology*, 39 JURIMETRICS J. 283 (1999); Neal R. Feigenson, *Sympathy and Legal Judgment: A Psychological Analysis*, 65 TENN. L. REV. 1 (1997). See generally Laura E. Little, *Negotiating the Tangle of Law and Emotion*, 86 CORNELL L. REV. 974 (2001) (noting the recent increase in legal attention to the emotions).

essays on law, philosophy, and the emotions,¹⁷⁶ and has published work on the emotional aspects of victim impact statements (VIS) in capital sentencing.¹⁷⁷ Professor Posner has recently examined the role of the emotions in legal theory in an article in the *Georgetown Law Journal*.¹⁷⁸ However, their work, which will likely be influential, construes the psychological research literature on emotions in such a way as to fundamentally undercut their own arguments and proposals.

Aspects of Professor Bandes' work on VIS illustrate one serious flaw in the LE literature.¹⁷⁹ The traditional perspective, dating back to Greek philosophy¹⁸⁰ and incorporated into typical court rulings,¹⁸¹ is that emotion acts to corrupt reasoning—that the two systems of emotion and cognition are distinct, and that the interference of emotions can lead to irrational and unjust decision-making. Correctly, Professor Bandes has suggested that this is an incomplete perspective—that we should recognize that the two “systems,” emotion and reason, are in fact *not* distinct—and that the two are inextricably intertwined; not only are “emotions . . . partially cognitive,” but “reasoning has an emotive aspect” as well.¹⁸² On her view, it is important that juries neither consider “the wrong emotions” (“prejudice and bigotry”) nor consider the “right emotions in the wrong contexts” (empathy that is “unaccompanied by critical reflection”).¹⁸³ Professor Posner, too, seeks, at least in part, to connect “emotion” and “cognition” by grounding a revision of economic modeling of behavior and thought in belief states under the influence of emotions.¹⁸⁴

The joinder of emotion and cognition misses a fundamental discussion in the psychological literature on emotions—the distinction between *conscious* and *unconscious* cognition or emotion.¹⁸⁵ The authors' joinder of emotion and reason is somewhat misleading—the two may be linked, but the fundamental question is whether they are linked *consciously*. Professor Bandes assumes the statement that the two systems are related implies that one can consciously restrain the effect of emotional information on one's reasoning.¹⁸⁶ Similarly, Professor Posner assumes that emotional states are nevertheless amenable to rational reasoning while

¹⁷⁶THE PASSIONS OF LAW, *supra* note 3.

¹⁷⁷Susan Bandes, *Empathy, Narrative, and Victim Impact Statements*, 63 U. CHI. L. REV. 361 (1996).

¹⁷⁸Posner, *supra* note 27.

¹⁷⁹See generally Jeremy A. Blumenthal, *The Admissibility of Victim Impact Statements at Capital Sentencing: Traditional and Non-Traditional Perspectives*, 50 DRAKE L. REV. 67 (2001).

¹⁸⁰See Kahan & Nussbaum, *supra* note 3.

¹⁸¹See, e.g., *Booth v. Maryland*, 482 U.S. 496, 508 (1987) (Powell, J.) (“As we have noted, any decision to impose the death sentence must be, and appear to be, based on reason rather than caprice or emotion.”) (internal quotation marks and citation omitted); *Gardner v. Florida*, 430 U.S. 349, 358 (1977) (Stevens, J.) (“It is of vital importance to the defendant and to the community that any decision to impose the death sentence be, and appear to be, based on reason rather than caprice or emotion.”).

¹⁸²Bandes, *supra* note 177, at 366, 396.

¹⁸³*Id.* at 393–94, 399.

¹⁸⁴Posner, *supra* note 27.

¹⁸⁵See also Little, *supra* note 175, at 987–92 (discussing emotion-cognition link in *The Passions of Law*).

¹⁸⁶Bandes, *supra* note 177, at 370–71.

they are being experienced,¹⁸⁷ though he only addresses this “cognitive content of emotion”¹⁸⁸ briefly. In contrast, if the two systems are linked at an unconscious or an “automatic” level, i.e., outside the control of conscious thought or awareness, then the possibility of conscious control is reduced, if not eliminated, and one may again be left with the danger of unwanted influences of emotion on cognition.¹⁸⁹ Even when it may be possible for individuals consciously to regulate their emotional reactions,¹⁹⁰ it is not altogether clear which individuals are best able to do so, under what circumstances, and with what motivation.¹⁹¹ Additional research on such matters (including on individual differences in the phenomenology of emotional states, as mentioned below) will help make better inferences about the impact of emotion on decision-making in the legal context.

In other instances in the LE literature, scholars simply make incorrect assumptions about social science research (and about human behavior).¹⁹² As an illustration, Professor Posner makes two fundamental assumptions in his article in order to explicitly build his “framework” for analyzing the relationship between law and the emotions around them. First, he assumes that individuals “usually know their emotional dispositions and can take steps to modify them or to avoid conditions that activate them.”¹⁹³ Second, he assumes that “people can anticipate and plan around their emotions, by cultivating emotional dispositions and avoiding stimuli.”¹⁹⁴ Both of these assumptions, however, are refuted by recent psychological literature.¹⁹⁵

In the first place, not only psychological research but also recent work in BLE have documented people’s tendency to have inflated, optimistic, or self-serving opinions of themselves and their abilities or qualities.¹⁹⁶ Professor Posner posits, for instance, “a person [who] knows that if he goes to a rowdy bar, he may be insulted, and further . . . knows that he is irascible.”¹⁹⁷ Knowing this, the person will likely avoid the bar or take

¹⁸⁷E.g., Posner, *supra* note 27, at 1981 (“[P]eople continue to act rationally while in an emotion state, even though they act differently from the way they do in the calm state.”).

¹⁸⁸*Id.* at 1991.

¹⁸⁹For a discussion of the role of unconscious cognition (or “appraisal”) in emotion, see, e.g., Richard S. Lazarus, *Cognition and Motivation in Emotion*, 46 AM. PSYCHOL. 352 (1991).

¹⁹⁰Neal Feigenson, “Another Thing Needful”: *Exploring Emotions in Law*, 18 CONST. COMM. 445, 459 (2001) (reviewing *THE PASSIONS OF LAW*, *supra* note 3).

¹⁹¹*See id.* (“Research also indicates conditions under which attempts at emotional regulation may be ineffective or even backfire, leading to greater reliance on the proscribed feeling.”) (footnote omitted).

¹⁹²In this regard, cf. Feigenson, *supra* note 190, at 457 (“Those inclined to take emotions in law seriously need whatever guidance empirical research can offer.”).

¹⁹³Posner, *supra* note 27, at 1982.

¹⁹⁴*Id.* at 1990.

¹⁹⁵Legal scholars’ canvassing of social science literature is often just as cursory as social scientists’ use of legal literature and case law. Such cursory investigation leads to a range of problems, many stemming from placing undue reliance on narrative summaries of literature or what are perceived as representative examples of research. Cf. Blumenthal, *supra* note 129. I discuss one remedy for this propensity in Section IV(B), *infra* (discussing meta-analysis).

¹⁹⁶E.g., SHELLY E. TAYLOR, *POSITIVE ILLUSIONS: CREATIVE SELF-DECEPTION AND THE HEALTHY MIND* 37-39 (1989) (noting tendency for self-serving biases); cf. Rachlinski, *supra* note 12, at 747 (noting “people are generally overconfident of their abilities”).

¹⁹⁷Posner, *supra* note 27, at 1982.

steps to alleviate his irascibility.¹⁹⁸ People's self-enhancement through biased self-perceptions, however, brings this assumption into question. It is far more likely that the person will *not* admit he is irascible; rather, it is *others* who will be viewed negatively, e.g., if he decides to go to that rowdy bar, it is the other patrons who will be perceived as instigators of any confrontations, whereas he will simply be reacting to circumstances. This "actor-observer effect"—the tendency to attribute one's *own* behavior to external, situational causes, and *others'* behavior to internal, dispositional causes—has been long-noted in social psychology.¹⁹⁹

Second, it is clear that people are in fact unable to accurately predict their own or others' emotional states, as demonstrated by recent social psychological research on the phenomenon of *affective forecasting*—the ability to predict how one will feel in the future.²⁰⁰ Such research shows that people overpredict the intensity and length of their emotional states, for instance, the pain that they or another will feel subsequent to an actual or hypothetical emotionally negative event. In one study, the authors examined people who had recently suffered the death of a loved one. Although the loss was obviously traumatic, the frequency with which subjects experienced positive moods, positive emotions, and general affect essentially returned to normal within a year after the loss.²⁰¹ The most recent research clearly shows the inaccuracy of predictions regarding the length and intensity of one's own and of others' emotional experience. Clearly this is relevant in the context of the VIS testimony Professor Bandes discusses,²⁰² but it has also been made explicit in recent BLE work.²⁰³

Professor Posner's assumptions about the effect of emotion on certain jury verdicts are also called into question by existing psycholegal research. He suggests a number of examples by which his hypotheses might be

¹⁹⁸*Id.*

¹⁹⁹The classic discussion appears in Edward E. Jones & Richard E. Nisbett, *The Actor and the Observer: Divergent Perceptions of the Causes of Behavior*, in *ATTRIBUTION: PERCEIVING THE CAUSES OF BEHAVIOR* 79, 80 (Edward E. Jones et al. eds., 1972). More recent discussions and refinements are Joachim Krueger, Jacob J. Ham & Kirsten M. Linford, *Perceptions of Behavioral Consistency: Are People Aware of the Actor-Observer Effect?*, 7 *PSYCHOL. SCI.* 259, 261 (1996); Richard W. Robins, Mark D. Splanca & Gerald A. Mendelsohn, *The Actor-Observer Effect Revisited: Effects of Individual Differences and Repeated Social Interactions on Actor and Observer Attributions*, 71 *J. PERSONALITY & SOC. PSYCHOL.* 375 (1996).

²⁰⁰Timothy D. Wilson, Thalia Wheatley, Jonathan M. Meyers, Daniel T. Gilbert & Danny Axson, *Focalism: A Source of Durability Bias in Affective Forecasting*, 78 *J. PERSONALITY & SOC. PSYCHOL.* 821, 821 (2000); Daniel T. Gilbert, Elizabeth C. Pinel, Timothy D. Wilson, Stephen J. Blumberg & Thalia P. Wheatley, *Immune Neglect: A Source of Durability Bias in Affective Forecasting*, 75 *J. PERSONALITY & SOC. PSYCHOL.* 617 (1998); see also John Sabini, Kathy Cosmas, Michael Siepmann & Julia Stein, *Underestimates and Truly False Consensus Effects in Estimates of Embarrassment and Other Emotions*, 21 *BASIC & APP. SOC. PSYCHOL.* 223 (1999); David A. Schkade & Daniel Kahneman, *Does Living in California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction*, 9 *PSYCHOL. SCI.* 340, 340 (1998). For a brief review of this literature, discussing implications for capital sentencing, see Blumenthal, *supra* note 179.

²⁰¹Eunkook Suh, Ed Diener & Frank Fujita, *Events and Subjective Life Satisfaction: Only Recent Events Matter*, 70 *J. PERSONALITY & SOC. PSYCHOL.* 1091, 1092 (1996).

²⁰²See Blumenthal, *supra* note 179.

²⁰³See, e.g., Jolls et al., *supra* note 1, at 1542 n.213 (citing sources documenting this inability); cf. Cass R. Sunstein, *Behavioral Analysis of Law*, 64 *U. CHI. L. REV.* 1175, 1185 (1997) (discussing "many studies showing that people do not accurately predict the consequences of certain major events").

empirically tested, such as the presentation of gory photographs as trial evidence.²⁰⁴

Research already exists, however, testing such hypotheses. For instance, Douglas and colleagues investigated mock juror reactions to graphic autopsy photographs at a simulated homicide trial, examining whether such evidence affected juror verdicts.²⁰⁵ Professor Posner predicted that showing such evidence would likely not influence juror verdicts (though his hypothesis was in the context of a negligence case). In contrast, the research demonstrated that *despite the mock jurors' beliefs that the photographs should not and did not influence their verdicts*, those subjects who reported higher levels of outrage or vengefulness as a result of seeing the photos were more likely to render a guilty verdict.²⁰⁶ In particular, the authors reported that

although the graphic photographs clearly influenced verdicts, participants felt that they should not and did not. . . . This finding is particularly troublesome because if jurors cannot even recognize the extent to which such evidence affects them, it will be impossible for them to reduce or control the impact of the evidence when instructed to do so by a judge.²⁰⁷

Obviously, this is an important point in light of the distinction above regarding conscious and unconscious emotional processes.²⁰⁸ These findings, including the unconscious influence of such affective stimuli on decision-making, are in fact consistent with some of the literature Professor Posner cites showing the influence of anger on punitiveness.²⁰⁹ A relevant research question may be the effect of limiting instructions for juries exposed to such evidence, which addresses jurors' abilities to consciously regulate such unconscious effects.²¹⁰ This can, of course, be done in a well-controlled jury simulation context. But an enterprising researcher may also usefully compare (with all the appropriate caveats) actual trials where such evidence was introduced and such instructions were or were not given.²¹¹

2. Individual Differences

Another basic objection to the literature, applicable not only to emotions but also to BLE, is a failure to consider *individual differences*.²¹² Although traditional law and economics may take into account individual

²⁰⁴ See Posner, *supra* note 27, at 1999.

²⁰⁵ Kevin S. Douglas, David R. Lyon & James R.P. Ogloff, *The Impact of Graphic Photographic Evidence on Mock Jurors' Decisions in a Murder Trial: Probative or Prejudicial?*, 21 LAW & HUM. BEHAV. 485, 494 (1997).

²⁰⁶ *Id.*

²⁰⁷ *Id.* at 499.

²⁰⁸ See *supra* notes 185–189.

²⁰⁹ See Posner, *supra* note 27, at 1999–2000 n.49 (collecting studies).

²¹⁰ See *supra* notes 185–189.

²¹¹ Cf. Gregory Mitchell, *Why Law and Economics' Perfect Rationality Should Not Be Traded for Behavioral Law and Economics' Equal Incompetence*, 91 GEO. L.J. (forthcoming 2002) (“The best solution in the context of studying the interaction of emotions and the law may be to supplement experimental simulations that employ standard affect manipulations with observational research, archival and case studies, and interviews and surveys of actual jurors.”).

²¹² See generally *id.* (reviewing individual differences in cognitive tasks).

differences among preferences or utility functions, it nevertheless has as its fundamental axiom *rationality*—the assumption that an individual chooses the best means to her ends.²¹³ Similarly, BLE focuses on various heuristics and biases to which people are subject when engaging in such rational decision-making.²¹⁴ And whether conceived of as conscious or not, cognitively-based or not, LE proceeds from the obvious assumption that everyone experiences emotions.

But such assumptions mask the very simple point that different people experience each of these phenomena differently.²¹⁵ To assume, for instance, that every individual is equally capable of equally skillful rational thought, however defined, is disingenuous. Traditional law and economics acknowledges individual differences in such thought, but assumes that those differences will vary systematically around a general mean.²¹⁶ But empirical research shows this to be unlikely at best, false at worst. In addition to the BLE literature showing predictably asymmetric deviations from purely rational thinking,²¹⁷ other research shows that individuals differ in how closely they approximate such thinking.²¹⁸ Similarly, individual differences exist in the heuristics and biases that BLE scholarship discusses,²¹⁹ such as the hindsight bias²²⁰ or, with some qualification, the representativeness heuristic.²²¹ And, unsurprisingly, there exists evidence that people vary in their experience of emotional states.²²²

Such differences clearly matter in the translation of research to policy. Consider Professor Hillman's observation that parties' over-optimism regarding their ability to perform a contract may lead to increased

²¹³E.g., Richard A. Posner, *Rational Choice, Behavioral Economics, and the Law*, 50 STAN. L. REV. 1551, 1551 (1998) (rationality means "choosing the best means to the chooser's ends").

²¹⁴See, e.g., Korobkin & Ulen, *supra* note 1.

²¹⁵Gregory Mitchell has recently conducted a detailed review of individual differences in the context of behavioral law and economics, also advocating increased awareness by and communication between "legal decision theorists" and social scientists. See Mitchell, *supra* note 211.

²¹⁶E.g., RICHARD A. POSNER, *ECONOMICS ANALYSIS OF LAW* 19 (5th ed. 1998) ("Economics is concerned with explaining and predicting tendencies and aggregates rather than the behavior of each individual person; and in a reasonably large sample, random deviations from normal rational behavior will cancel out."); Mark C. Suchman, *On Beyond Interest: Rational, Normative and Cognitive Perspectives in the Social Scientific Study of Law*, 1997 WISC. L. REV. 475, 478. One problem with this approach, of course, is that abstracting to a high enough level of aggregation eliminates any possibility of actually making predictions in individual cases—a similar criticism to that which has been recurrently leveled at social science.

²¹⁷See sources cited *supra* note 1 and citations therein.

²¹⁸KEITH E. STANOVICH, WHO IS RATIONAL: STUDIES OF INDIVIDUAL DIFFERENCES IN REASONING 99 (1999).

²¹⁹See generally Keith E. Stanovich & Richard F. West, *Individual Differences in Rational Thought*, 127 J. EXPERIMENTAL PSYCHOL.: GEN'L 161 (1998).

²²⁰See, e.g., Bas Verplanken & Rik G. Pieters, *Individual Differences in Reverse Hindsight Bias: I Never Thought Something Like Chernobyl Would Happen. Did I?*, 1 J. BEHAV. DECISION MAKING 131 (1988); Jennifer D. Campbell & Abraham Tesser, *Motivational Interpretations of Hindsight Bias: An Individual Difference Analysis*, 51 J. PERSONALITY 605 (1983).

²²¹See, e.g., Stan R. Moore, Ronald C. Smith & Richard Gonzalez, *Personality and Judgment Heuristics: Contextual and Individual Difference Interactions in Social Judgment*, 23 PERSONALITY & SOC. PSYCHOL. BULL. 76 (1997).

²²²See, e.g., Lisa Feldman Barrett, *Discrete Emotions or Dimensions? The Role of Valence Focus and Arousal Focus*, 12 COGNITION & EMOTION 579 (1998); Kathy A. Winter & Nicholas A. Kuiper, *Individual Differences in the Experience of Emotions*, 17 CLINICAL PSYCHOL. REV. 791 (1997). See generally Feigenson, *supra* note 190, at 460 (noting the importance of examining individual differences in the phenomenology of emotion).

willingness to enter into contracts containing clauses for liquidated damages.²²³ Because this over-optimism may be an unconscious bias from which parties should be protected, courts should perhaps be increasingly suspicious of such penalty clauses, a suspicion that could lead to the development of specific legal rules or legislative policies regarding such clauses. If, however, there are individual differences in the susceptibility to this bias, a logical extension would be to match the policy to the litigant, i.e., courts or legislatures should apply rules or policies contextually, depending on a party's susceptibility. Although this extension is logical, it raises a host of additional problems,²²⁴ such as somehow establishing an objective metric of such susceptibility.²²⁴

3. *Advantages of Legal Research*

Despite the unfamiliarity I previously described, legal academics' *familiarity* with issues can give them a distinct advantage in their writing on social scientific issues. As discussed in the next Section, social scientists sometimes have limited familiarity with specific doctrinal issues in the law.²²⁵ This is a recurring concern, and may lead to researchers proposing "answers" to policy questions that are in fact not immediately relevant to legal questions. Similarly, social scientists unfamiliar with less salient aspects of or issues in the law (such as procedural rules, liquidated damages, proximate cause, or distinctions among elements of a crime or of negligence), may simply not know to broaden their scope of inquiry into numerous areas that are empirically tractable. Obviously, lawyers are not so unfamiliar. Two profound benefits accrue when legal academics incorporate social science research into their work, thereby adding knowledge with which they can apply such findings to specific legal questions. First—with the essential caveats that the social science data be sound and be applied intelligently, with an understanding of its theoretical and methodological context in the rest of the relevant social science field—more legally sophisticated inferences can be made about the relevance of the data. Second, when legal scholars identify areas in which little empirical research has been done, social scientists can assess, and then refine, those scholars' application of existing research to those legal issues.²²⁶

²²³Robert A. Hillman, *The Limits of Behavioral Decision Theory in Legal Analysis: The Case of Liquidated Damages*, 85 CORNELL L. REV. 717, 725–29 (2000).

²²⁴There is, of course, the possibility for a more straightforward approach, as where a court uses relative bargaining power as a measure of the viability of a contract. *E.g.*, *Continental Basketball Association, Inc. v. Ellenstein Enterprises, Inc.*, 669 N.E.2d 134, 141 (Ind. 1996) (refusing to void a contract where there was no indication of unequal bargaining power between parties). In a sense this does key the enforceability of a contract to individual differences between parties. Establishing such a bright-line standard for susceptibility to cognitive biases, however, seems more difficult. *See also* discussion *infra* Section V(B), addressing instances where data and policy values conflict.

²²⁵*See infra* Section III(B).

²²⁶One scholar recently developed a bibliography collecting examples of behavioral research being applied in legal scholarship. Donald C. Langevoort, *Behavioral Theories of Judgment and Decision Making in Legal Scholarship: A Literature Review*, 51 VAND. L. REV. 1499, 1529–40 (1998). In their discussion of behavioral law and economics, Jolls et al. add an appendix illustrating the areas of the law to which they applied the social science research they reviewed. Jolls et al., *supra* note 1, at 1548–50.

B. SOCIAL SCIENTISTS' UNDERSTANDING OF THE LAW

In the last section, I outlined ways in which misuse or outright ignorance of social science literature undercuts some of the claims made by legal scholars developing an interdisciplinary literature in law journals. On the other hand, the work of social scientists also presents problems. Many of the recurring criticisms of social science and law outlined above²²⁷ apply here as well; thus, this subsection will be less detailed than the last.

The basic concern with the design and execution of empirical social science studies designed to reform or influence the law is the studies' *sophistication*. By this I mean not only methodological sophistication but also theoretical and legal sophistication. Issues of methodological sophistication were discussed above in the context of jury studies; here I turn to the latter two types of sophistication.

1. *Theoretical Sophistication*

Legal scholars have chided some social scientists for being atheoretical or even anti-theoretical.²²⁸ Such scolding is not limited to the law; social scientists engage in it as well. As with the legal scholars, they emphasize the need for predictive ability in social science applied to law, stating: "Only when we develop and test theories that provide [causal] explanations can we begin to understand fully the phenomenon. Furthermore, once we understand the cause of the phenomenon, we can begin to learn how the law can be revised, when necessary, to better reflect the reality of human behavior."²²⁹

In a review of legal psychological articles in one interdisciplinary journal, Professor Mark Small persuasively demonstrated the seriousness of the problem.²³⁰ Professor Small reviewed approximately one hundred articles published in *Law and Human Behavior* over a five-year period.²³¹ Categorizing the articles by theoretical "stages," he found that an overwhelming number (ninety-six out of one hundred and five) could only be characterized as descriptive ("Stage I"), with researchers seeking only "to define or describe a particular phenomenon."²³² The remainder fell into "Stage II," where "investigators construct descriptive theories that account for observed behaviors."²³³ Not a single piece of legal psychological work published in the discipline's top journal qualified as "Stage III," presenting explanatory accounts of behavior unrestricted by domain, i.e., the overarching theoretical and predictive accounts that law and economics

²²⁷See *supra* Section II(E).

²²⁸See Posner, *supra* note 213, at 1552. See also Jennifer Arlen, *Comment: The Future of Behavioral Economic Analysis of Law*, 51 VAND. L. REV. 1765, 1768 (1998).

²²⁹Ogloff, *supra* note 111, at 3-4.

²³⁰Mark A. Small, *Legal Psychology and Therapeutic Jurisprudence*, 37 ST. LOUIS U. L.J. 675, 690-92 (1993).

²³¹Consistent with the discussion above, approximately forty percent of these articles concerned jury decision-making. See *id.* at 691.

²³²*Id.* at 690-91.

²³³*Id.* at 691.

scholars seek.²³⁴ It is not clear that this problem has been remedied in the years since Professor Small's review.²³⁵

2. *Legal Sophistication*

An equally serious problem with social scientists' efforts in the legal system arose as long ago as Wigmore's rejection of Munsterberg's work: the level of legal sophistication exhibited by the researcher and, crucially, by the research questions addressed.²³⁶ Where a legally inappropriate or irrelevant question is proposed, the helpfulness of the research may be moot from the beginning.

Again, Wigmore's critique focused on Munsterberg asking the "wrong question": the research Munsterberg reviewed on the unreliability of testimony may have shown that students failed to accurately report the actions he performed during his classroom experiments and thus brought into question the reliability of eyewitnesses in court.²³⁷ But Munsterberg did not take the next step and show that such failure to accurately report would necessarily translate into *improper verdicts*, and thus, Wigmore argued, his claims were inappropriate.

More recently, William Thompson has noted similar flaws in research that investigated jurors' use of hearsay testimony.²³⁸ He reviewed several research studies examining how jurors' judgments of evidence might have been influenced by specific pieces of hearsay testimony.²³⁹ In some cases the research addressed Wigmore's concern and examined whether the use of hearsay influenced the ultimate verdict.²⁴⁰ According to Professor Thompson, however, such research efforts failed to address the fundamental legal question, whether people evaluate hearsay appropriately, because they "lacked an objective standard against which to compare jurors' evaluations. In other words, the studies show how much weight jurors gave to specific pieces of hearsay evidence, but they do not tell us

²³⁴*Id.* at 691–92.

²³⁵See Ogloff, *supra* note 1, at 473. Ogloff makes the same point, but he discusses one candidate for such a theory-driven research program, work by Richard Wiener and colleagues. My approach and suggestions here reflect some of the points made in their "social analytic jurisprudence" model. See *id.* (reviewing assumptions made in Wiener and colleagues' model).

²³⁶See, e.g., *id.*, at 458 (The psycholegal "movement largely has been driven by psychologists, often with little knowledge of the law, conducting studies or practicing in areas of interest to them, based on their own disciplinary pedagogy").

²³⁷But see Moore, *supra* note 38, at 127 (suggesting that because the individuals in question reported what they saw, and did not report what they did not see or remember seeing, in fact they "would make exceptionally good witnesses").

²³⁸William C. Thompson, Empirical Study of Hearsay: Pitfalls and Prospects, Paper presented at American Psychology/Law Society Conference, Redondo Beach, CA (Mar. 7, 1998).

²³⁹E.g., Richard F. Rakos & Stephan Landsman, *Researching the Hearsay Rule: Emerging Findings, General Issues, and Future Directions*, 76 MINN. L. REV. 655 (1992).

²⁴⁰E.g., Jonathan M. Golding, Rebecca Polley Sanchez & Sandra A. Sego, *The Believability of Hearsay Testimony in a Child Sexual Assault Trial*, 21 LAW & HUM. BEHAV. 299 (1997) (hearsay testimony increased defendant's perceived guilt); Stephan Landsman & Richard F. Rakos, *Research Essay: A Preliminary Empirical Enquiry Concerning the Prohibition of Hearsay Evidence In American Courts*, 15 LAW & PSYCHOL. REV. 65, 76 (1991) (hearsay introduced with other evidence had only minimal effect on verdict).

whether the jurors gave the hearsay evidence more or less weight than it deserved.”²⁴¹

Finally, social scientists may research questions that are not incomplete, as were the hearsay studies just mentioned, but that are in fact irrelevant to the law because they present a question that would simply not arise in the legal context.²⁴² For instance, Neil Vidmar has argued that some recent research on jury decision-making in punitive damages cases suffers from this flaw.²⁴³ Reviewing a jury simulation study examining jury decisions as to whether punitive damages were warranted,²⁴⁴ Professor Vidmar argued that asking mock jurors this question conflated the role of the judge and jury. Whether punitive damages are warranted, Vidmar argued, is a preliminary matter for the judge; only after the judge decides in the affirmative does a jury address the facts and the potential amount of such damages.²⁴⁵ In two of the four cases that the researchers presented,²⁴⁶ there was legal disagreement between the trial and appellate courts over whether punitive damages were warranted; the trial courts ruled they were, but were reversed on appeal.²⁴⁷ (In the other two cases, the trial court did not allow consideration of punitive damages.²⁴⁸) Vidmar suggested that this disagreement obviated both the legal basis for jury review and any relevance the study might have for policy issues.²⁴⁹

²⁴¹Thompson, *supra* note 238. At least in the context of Golding et al., this criticism may be exaggerated, to the extent that those authors included several conditions: no witness; child witness; adult witness presenting hearsay testimony attributed to the child; and both child and adult witnesses. To that extent baselines were developed; however, there was no indication whether the actual testimony could have been allowed, and thus no actual *legal* baseline existed.

²⁴²I think, however, that this issue need not be dismissed so quickly. First, a researcher may address facts that, though not answering a specific legal question, may be helpful in lending insight to one. Thus, with proper caveats acknowledged, general research on psycholegal phenomena may be relevant and applicable on a broader scale than a specific question at a trial. Second, of course, laws vary among jurisdictions, and laws change over time, occasionally in response to empirical research. A rule of evidence, for instance, based on assumptions about human behavior, may exist in one state but not another, and thus be empirically tractable and useful. As an example, the research on eyewitness ability conducted before rules admitting expert testimony on such witnesses became profoundly useful in legal reform and subsequently in court. Thus, psycholegal researchers must be aware of legal doctrine, and in seeking to reform or address specific legal questions, should strive to conform the research question to that legal doctrine.

²⁴³Neil Vidmar, *Juries Don't Make Legal Decisions! And Other Problems: A Critique of Hastie et al. on Punitive Damages*, 23 LAW & HUM. BEHAV. 705, 705 (1999) (suggesting that Hastie et al.'s study asked jurors to make decisions about law, “a fatal conceptual flaw . . . that renders it irrelevant to legal policy”).

²⁴⁴Hastie et al., *supra* note 141.

²⁴⁵Vidmar, *supra* note 243, at 709.

²⁴⁶*E.g.*, Harper v. Zapata Off-Shore Co., 563 F. Supp. 576 (1983).

²⁴⁷Vidmar, *supra* note 243, at 707.

²⁴⁸*Id.* at 707–08.

²⁴⁹In an accompanying article, Hastie and colleagues responded to this criticism, though perhaps not as strongly as they might have:

Vidmar claims that we asked mock jurors to make decisions about the law, decisions that are the exclusive province of the judge. This is incorrect. We asked mock jurors to make exactly the decisions they are asked to make, with exactly the legal instructions they are given, in punitive damages cases.

Reid Hastie, David A. Schkade & John W. Payne, *Reply to Vidmar*, 23 LAW & HUM. BEHAV. 715, 716 (1999).

Other commentators suggested that, in fact, both sides were correct because, after all, the actual juries did get to make some decision about punitive damages, even if the legal ruling allowing that was later reversed. Phoebe Ellsworth, *Sticks and Stones*, 23 LAW & HUM. BEHAV. 719, 721 (1999).

Such disputes arise in other research areas as well. A recent colloquy in *Law and Human Behavior*, for instance, discussed the legal validity of certain studies on repressed memory.²⁵⁰ Professors Wasby and Brody criticized one repressed memory study for presenting what they considered a legally invalid fact pattern: an individual subjected to sexual abuse as a child who “always remembered the abuse, but did not discuss it until recently while in therapy.”²⁵¹ They pointed out that in many jurisdictions, the victim might be precluded from bringing an action against the abuser because of statutes of limitation.²⁵² The authors encouraged psycholegal researchers to be aware of legal doctrine, and to acknowledge and make explicit when aspects of their work diverge from legal accuracy.²⁵³ Similarly, a proposal about a decade ago by Charles Ewing to develop a “psychological self-defense” for battered women who kill their abusers²⁵⁴ met with sharp criticism from commentators, including an objection that Professor Ewing mischaracterized the defense as an excuse, rather than a justification.²⁵⁵

IV. POTENTIAL REMEDIES

Despite the foregoing critiques, all is not lost. As we move deeper into the twenty-first century, when data are more and more important for law and policy making;²⁵⁶ when legal academia is turning to a “new” psychology and law;²⁵⁷ and when social scientists are pushing more to be heard in law, what can be done to increase communication, to get the best data and theories into both law and psychology journals, into the courtroom, and into policy?

At least two suggestions seem helpful. The first, mirroring the interdisciplinary nature of the research undertaken, is to make the researchers’ backgrounds and perspectives more strongly interdisciplinary.

²⁵⁰Compare Stephen L. Wasby & David C. Brody, *Studies of Repressed Memory and the Issue of Legal Validity*, 21 LAW & HUM. BEHAV. 687 (1997) (criticizing earlier repressed memory studies) with Jonathan M. Golding, Amye R. Warren & David F. Ross, *On Legal Validity, Internal Validity, and Ecological Validity: Comment on Wasby and Brody*, 21 LAW & HUM. BEHAV. 693 (1997) (responding to criticism).

²⁵¹Wasby & Brody, *supra* note 250, at 688.

²⁵²*Id.*

²⁵³In response, Golding et al. make the important point that their research balanced legal accuracy with a number of other factors important to scientific research, such as internal validity, i.e., ensuring that their experiment in fact addressed their research question and that they could eliminate alternative explanations for their results. Golding et al., *supra* note 250, at 693–94.

²⁵⁴Charles P. Ewing, *A Proposed Justification for Battered Women Who Kill*, 14 LAW & HUM. BEHAV. 579 (1990); see also CHARLES P. EWING, *BATTERED WOMEN WHO KILL: PSYCHOLOGICAL SELF-DEFENSE AS LEGAL JUSTIFICATION* (1987).

²⁵⁵See Stephen J. Morse, *The Misbegotten Marriage of Soft Psychology and Bad Law*, 14 LAW & HUM. BEHAV. 595 (1990). Again, this may be a closer question than Professor Morse argued; more recent debates have been framed around just how to characterize such battered women’s defenses. See generally David A.J. Richards, *Self-Defense and Relations of Domination: Moral and Legal Perspectives on Battered Women Who Kill*, 57 U. PITT. L. REV. 461, 464–68 (1996) (discussing symposium pieces addressing the excuse/justification question).

²⁵⁶*E.g.*, *General Elec. Co. v. Joiner*, 522 U.S. 136, 149 (1997) (Breyer, J., concurring) (“Economic, statistical, technological, and natural and social scientific data are becoming increasingly important in both routine and complex litigation”) (citation omitted).

²⁵⁷See *supra* note 12; *infra* note 347.

Thus, this suggestion focuses on how social science research on legal questions is *conducted*. The second focuses on how that research should be *presented*—I draw attention to the common social science practice of conducting *meta-analyses*, quantitative syntheses and analyses of existing individual studies. Such procedures directly address most, if not all, of the tensions and themes identified in Section II, and, if practiced more commonly in the social scientific application of research to the law, might also help resolve some of the problems with both disciplines described in Section III.

A. COMBINED PERSPECTIVES

By definition, the application of social science research and theory to the law crosses disciplinary boundaries. Arguably, many of the drawbacks in existing research may be traced to inadequate training or knowledge in one discipline by practitioners of the other—for instance, as alluded to earlier, lawyers and courts often expect too much from empirical research and researchers, may misapply their findings, may not seek out the most current data to incorporate into their briefs, articles, or rulings, and may not have the methodological or statistical background to conduct or evaluate empirical research.²⁵⁸ Similarly, social scientists are typically untrained in legal doctrine, legal theory, court functioning, procedural law, or aspects of the legal system outside of the conventional, salient trial, and thus unduly limit their research agendas.

Perhaps the most straightforward response would be increased education, training, and communication. This can occur as early as scholars' undergraduate careers, and psycholegal scholars have taken numerous steps to increase awareness, exposure, and practical experience in legal psychology at the undergraduate level.²⁵⁹ The suggestions they make can apply across social science disciplines. The discussion below, however, focuses on those more likely to engage in long-term research, and addresses graduate education and publication opportunities.

1. *Joint Degrees*

In order for a researcher to obtain the best understanding of a social science discipline and the law, he or she might simply pursue graduate education in both fields. As noted above, an increasing number of law school faculty possess dual degrees,²⁶⁰ and the consequent interdisciplinary training helps to keep a foot in both “camps.” Such training may require a scholar to be familiar, and current, with multiple literatures across

²⁵⁸Cf. Fineman & Opie, *supra* note 7, at 108 (“For example, legal policy-makers who are unfamiliar with social science material may use it to make generalizations based on small, select, and unrepresentative samples, or undue weight may be given to limited research findings. In addition, legal authors may be unable (or unwilling) to acknowledge methodological problems in the social science studies upon which their legal policy arguments are built.”).

²⁵⁹E.g., Solomon F. Fulero, Edith Greene, Valerie Hans, Michael T. Nietzel, Mark A. Small & Lawrence Wrightsman, *Undergraduate Education in Legal Psychology*, 23 LAW & HUM. BEHAV. 137 (1999).

²⁶⁰See *supra*, note 169.

disciplines. Moreover, as I implied above in Section III(A), this might require familiarity not only with doctrinal work in law, but also with progress in the other substantive field and, importantly, with interdisciplinary research that combines the two. Using the example of legal psychology, a scholar would keep up with legal literature, with research in psychological journals, and with journals such as *Law and Human Behavior* or *Behavioral Sciences and the Law*.

This necessary familiarity with interdisciplinary advances suggests another possibility for joint education, a dual degree specially designed for interdisciplinary researchers. In the legal psychology field, for instance, a small number of such programs exist, awarding both a Ph.D. (or Psy.D.) in psychology and a J.D.,²⁶¹ the program often takes about seven years. The advantage here over simply obtaining sequential degrees is a greater appreciation for the interaction between the fields, and more of an understanding of the requirements for conducting and presenting interdisciplinary research.²⁶² Drawbacks of obtaining dual degrees by either path, of course, include the substantial investment of time and money, and even proponents are not sure of such paths' payoff in concrete terms.²⁶³

Following such a path, however, would address many of the concerns I have raised herein, and such dual or interdisciplinary training seems the gold standard against which to measure. It addresses a number of criteria identified by leading psycholegal scholars as essential for the education of interdisciplinary researchers and implied throughout this Article: a knowledge of *substantive psychology*; a knowledge of *research design and statistics*; substantive *legal knowledge*; knowledge of *substantive legal psychology*; and actual research experience in applying all of these factors—*scholarship and training*.²⁶⁴

Some scholars have implied that this may be expecting too much. David Faigman, one of the most insightful commentators upon interdisciplinary work in law and psychology, has gone so far as to state that “[t]hose psychologists who specialize in the law must decide individually whether they are attorney-psychologists or psychologist-attorneys. It is not possible to be both.”²⁶⁵ He sees a more limited, reactive role for social scientists in affecting the law, and in a sense places the burden on the legal system to seek out and use social science research where applicable, subject to correction by psychologists if it does so badly.

²⁶¹See generally Donald N. Bersoff, Jane Goodman-Delahunty, J. Thomas Grisso, Valerie P. Hans, Norman G. Poythress, Jr. & Ronald G. Roesch, *Training in Law and Psychology: Models from the Villanova Conference*, 52 AM. PSYCHOL. 1301 (1997) (reviewing graduate education in psychology and law).

²⁶²See generally Alan J. Tomkins & James R.P. Ogloff, *Training and Career Options in Psychology and Law*, 8 BEHAV. SCI. & L. 205 (1990).

²⁶³See Bersoff et al., *supra* note 261, at 1308 (dual degrees' “worth is still unproven”). The “worth,” of course, depends on the criteria chosen.

²⁶⁴See *id.* at 1301–10.

²⁶⁵Faigman, *supra* note 21, at 679; see *id.* at 680–81 (“Many who work in the area of psychology and law, of course, own two hats, being trained in both disciplines. But it is inappropriate to wear the two hats at the same time.”).

“[P]sychology should be limited to criticizing the law for failure to use its findings well.”²⁶⁶ Similarly, Professor Faigman analogizes law and science to different branches of government, useful for engaging in checks and balances.²⁶⁷

It is certainly difficult to maintain a currency with multiple literatures such that an interdisciplinary scholar can contribute meaningfully to both disciplines. Moreover, as I outline in the Article’s final section, there are conflicting values in social science and the law that often make it very difficult for conversation across their boundaries. But my disagreement with Professor Faigman is more straightforward. First, of course, without cross-disciplinary training, it is far more likely that legal researchers and policymakers will misuse social science findings. Second, however, quality interdisciplinary efforts hold out the promise of preventing that misuse before it occurs: in brief, shouldn’t we try to get it right the first time? It seems more useful to take an active approach than a reactive one, if taking that approach well can in fact inform legal policy and prevent the misuse or nonuse of relevant data. In Section IV(B) below, I advocate one way that such data can be presented in a useful fashion.

2. *Joint Authorship*

I do not mean to suggest that a lack of joint degrees should preclude anyone from conducting interdisciplinary research. Indeed, some of the most influential work is conducted by legal psychologists, legal scholars, and other social scientists with only one degree, but who take the time to become familiar with the legal issues, theory, and doctrine that instantiate the empirical research question to be addressed. Rather, I suggest that some such effort, whether through formal education or informal training, is necessary for the interdisciplinary research to be of the highest quality and to be relevant to the legal system.

Of course, such training is not always possible. Where it is difficult for one person to obtain the relevant training in both fields, the best alternative is collaborative work with another scholar with expertise in the other field. In most cases this is an enormous benefit,²⁶⁸ as each author is able to draw upon the other’s knowledge base to supplement her own. In their recent collaboration, Professors Stephen Ceci and Richard Friedman explain this well:

The authorship of this Article is rather unusual. One of us, Ceci, is a psychological researcher, who for nearly two decades has examined the question of children’s suggestibility. . . . The other author of this Article,

²⁶⁶*Id.* at 680. See *supra* text accompanying note 226, reflecting this suggestion.

²⁶⁷Faigman, *supra* note 21, at 681.

²⁶⁸In other contexts, however, even collaborative efforts are disappointing. A recent joint effort in legal psychology by law professor Paul Robinson and psychology professor John Darley, for instance, has met with trenchant criticism. See, e.g., Deborah W. Denno, *The Perils of Public Opinion*, 28 HOFSTRA L. REV. 741 (2000) (critiquing PAUL H. ROBINSON & JOHN M. DARLEY, JUSTICE, LIABILITY, AND BLAME: COMMUNITY VIEWS AND THE CRIMINAL LAW (1995)); Christopher Slobogin, *Is Justice Just Us? Using Social Science to Inform Substantive Criminal Law*, 87 J. CRIM. L. & CRIMINOLOGY 315 (1996) (also critiquing Robinson & Darley).

Friedman, is a legal academic who writes on evidence law, among other areas. Neither of us claims any expertise in the field of the other. We have joined in this collaboration, however, because we believe it may be productive in leading to a better understanding of how the current state of knowledge of children's capacities and vulnerabilities should affect the operation of the legal system. . . . But neither of us presumes to offer evaluations or make recommendations outside the bounds of our own expertise; when we step beyond those bounds, we are each relying on our coauthor.²⁶⁹

This is, of course, a simple and straightforward suggestion, but it can only help to improve the quality of interdisciplinary work.

B. META-ANALYSIS

The various educational paths and publication options just described aim to increase scholars' knowledge and experience across disciplines, and to give a background for one useful way to approach interdisciplinary "law and" work. But once relevant empirical research is identified and conducted, the legal system can benefit from more effective presentation of that research.

In the above discussion of eyewitness testimony research and some of the reasons for the law's hesitancy to make use of it, I referred to a perceived lack of "summarized research" in the area. More generally, one of the recurring tensions between law and social science stems from the perceived unavailability of social science research in the law,²⁷⁰ the perceived haphazard dissemination across numerous journals in different disciplines, and the perceived lack of applicability of certain social science findings that might be relevant to a legal question but are not necessarily directly on point.²⁷¹ Indeed, such perceptions and such factors allow lawyers, legislators, and courts to pick and choose the research findings they find most palatable, most persuasive, or most consistent with their own agenda, because they encourage the distinction of discrete studies from each other.²⁷² In turn, such distinctions encourage the perception of various social scientific work as disconnected, superficial, or ungrounded in cohesive theory.²⁷³ Chief Justice Rehnquist's analysis of the relevant social science work in *Lockhart v. McCree*, for instance, proceeded seriatim along a list of studies he was able to discretely criticize and reject.²⁷⁴ He

²⁶⁹Ceci & Friedman, *supra* note 14, at 39 n.13.

²⁷⁰*Cf. supra* notes 51–52.

²⁷¹*See, e.g., supra* note 55; Loh, *supra* note 18, at 662–63 (noting a failure by experimenters to address the "critical legal question" when designing and conducting research; for instance, in the context of eyewitness reliability, "[t]he ultimate issue is not the frequency of testimonial errors of witnesses but the prejudicial impact, if any, upon the trial outcome.>").

²⁷²Reminiscent of legal scholars "distinguishing" cases whose facts or law do not match the point in question (or the desired outcome).

²⁷³*Cf. Posner, supra* note 213, at 1552 ("behavioral economics is . . . antitheoretical"); *id.* at 1558–61 (behavioral economics is "undertheorized"); Arlen, *supra* note 228, at 1768 (behavioral economics and the cognitive psychology on which it is based do not have a "coherent, robust, tractable model of human behavior").

²⁷⁴*See supra* note 10 and accompanying text.

conducted a similar study-by-study review in the more recent *General Electric Co. v. Joiner* to show that the studies “were so dissimilar to the facts presented in this litigation” that they were properly excluded from consideration at trial.²⁷⁵

Unfortunately, the ways in which conventional social scientific work is presented to the legal system implicitly encourage such an approach. In particular, most studies, even those that are entirely methodologically sound, are single studies²⁷⁶—for example, the impact of jury size on the quality of verdicts, gender differences in the perception of sexual harassment, the impact of certain individual differences such as authoritarian orientation, or whether pretrial publicity might influence juror decisions. However, due to obvious constraints, the authors cannot summarize an entire body of research. Further, relevant studies are not always immediately accessible. A Westlaw search by a judge’s law clerk or an ambitious attorney to discover relevant studies to persuade a court picks up few empirical articles and articles from a sharply restricted time period. Graduate student dissertations are rarely available with ease, even when they are known. And searches through psychological databases will not find empirical work published in legal journals. Finally, little concrete indication can be given whether factors external to the study may have influenced it—the stimuli used for instance, or the subject matter of the trial examined, the subject sample, when the study was conducted, or even which researchers conducted the study.

However, common approaches exist in the social sciences that can alleviate such problems. Perhaps the most useful in addressing each of the concerns just raised is the *meta-analytic* procedure (“*meta-analysis*”).²⁷⁷ In conventional single-study empirical work, the unit of analysis is the individual person or case. In meta-analysis, however, the unit of analysis is the individual study. That is, researchers collect every relevant study addressing a particular research question, and then analyze the studies’ findings as individual pieces of data.²⁷⁸ Traditionally, two approaches are

²⁷⁵General Elec. Co. v. Joiner, 522 U.S. 136, 144–45 (1997).

²⁷⁶In this category I include even multi-experiment studies on the same research question, for reasons discussed below. See *infra* note 303.

²⁷⁷See ROBERT ROSENTHAL, *META-ANALYTIC PROCEDURES FOR SOCIAL RESEARCH* (rev. ed. 1991); Robert Rosenthal, *Writing Meta-Analytic Reviews*, 118 PSYCHOL. BULL. 183 (1995); Robert Rosenthal & M. Robin DiMatteo, *Meta-Analysis: Recent Developments in Quantitative Methods for Literature Review*, 52 ANN. REV. PSYCHOL. 59 (2001). (For many of Rosenthal’s students, that 1991 revised edition is the “bluebook.”)

Other standard reference works on meta-analysis include GENE V. GLASS, BARRY MCGAW & MARY LEE SMITH, *META-ANALYSIS IN SOCIAL RESEARCH* (1981); JOHN E. HUNTER & FRANK L. SCHMIDT, *META-ANALYSIS: CUMULATING RESEARCH FINDINGS ACROSS STUDIES* (1982). The commonplace nature of meta-analytic research should belie any suggestion that it is a “novel” procedure, the basis on which it was rejected by at least one trial court. See *In Re Paoli R.R. Yard PCB Lit.*, 706 F. Supp. 358, 373 (E.D. Pa. 1988) (“Paoli I”); *rev’d*, 916 F.2d 829 (3d Cir. 1990) (“Paoli II”). It is not. E.g., ROSENTHAL, *supra*, at 5–11 (reviewing historical examples and giving numerous examples of meta-analysis’s use); *Paoli II*, 916 F.2d at 857 (“hundreds of meta-analyses are done each year”).

²⁷⁸*Black v. Rhone-Poulenc, Inc.*, 19 F. Supp. 2d 592, 604 (S.D.W.V. 1998) (“In short, a meta-analysis simply pools all of the data from many studies and treats them as one mega-study.”); *United States v. Ngyuen*, 793 F. Supp. 497, 512 & n.23 (quoting expert Professor Steven Penrod defining meta-analysis as an “accepted procedure” that “combin[es] the results of independent studies

taken in meta-analysis. First, the average effect size in an area of research can be calculated. For instance, across all studies comparing the qualities of six-person juries to twelve-person juries, the average difference between the two categories could be found.²⁷⁹ Across all studies comparing men's and women's perceptions of social behavior that might be considered sexual harassment, an average gender difference might be quantified.²⁸⁰ Second, and perhaps less essential, the statistical significance of the studies in a discipline can be calculated, i.e., whether the studies as a body or subsets of the studies show that effects found were more likely due to a manipulation than due to chance.²⁸¹

Numerous benefits emerge from the meta-analytic approach. First, again, one can determine the average effect size in an area of research. For instance, in the above meta-analysis of gender differences in perceived sexual harassment, the average gender difference was approximately .17, suggesting that across all studies, women tended to see behavior as harassment more than men, but to a far smaller extent than had been assumed.²⁸² This aggregation and averaging can lead to a more robust finding from which to infer policy than either an abbreviated selection of research findings or pure assumption or anecdote.²⁸³ Second, meta-analysis allows for quantitative rather than qualitative review of literature. Accordingly, far less information will be lost in "translation"; where data about each study that has been conducted in an area can be quantified, conscious and unconscious biases in selecting, discussing, and evaluating individual studies can be more easily avoided.

Third, a full meta-analysis typically gathers both published and unpublished work (e.g., dissertations, pre-publication drafts, and even conference presentations), giving a far richer perspective on the extant literature than a review restricted to published work.²⁸⁴ A court's application of a social-scientific meta-analysis, rather than of a single or even of a subset of multiple studies, provides the best indication of the state of knowledge in an area.²⁸⁵

in order to arrive at a general conclusion"). Professor Penrod's definition is, in fact, somewhat more accurate—statistical problems may arise when the raw *data* of studies are pooled, rather than their *results*. See ROSENTHAL, *supra* note 277, at 99–101.

²⁷⁹E.g., Saks & Marti, *supra* note 133.

²⁸⁰Blumenthal, *supra* note 129.

²⁸¹I consider this less essential because traditionally (but unfortunately), studies are often not submitted for publication, and sometimes not even made available to the research community, if some statistically significant result is not present. ROSENTHAL, *supra* note 277, at 103–04. Similarly, because statistical significance is mathematically related to the size of the sample being analyzed, *id.* at 14–15 & tpls.2.1 & 2.2, when there is a large enough aggregated sample, statistical significance can usually be found. Indeed, again, this is an aspect of meta-analysis that courts have misunderstood, the idea that pooling across studies may give more reliable results. *Cf. infra* note 298.

²⁸²Blumenthal, *supra* note 129, at 43.

²⁸³E.g., *Rabidue v. Osceola Refining Company*, 805 F.2d 611, 620 (6th Cir. 1986) (Keith, J., dissenting) (asserting, in contrast to subsequent meta-analytic findings, that there is a "wide divergence" between men and women's perception of what constitutes sexual harassment).

²⁸⁴See, e.g., ROSENTHAL, *supra* note 277, at 37.

²⁸⁵Single or primary studies are often (but not exclusively) useful for identifying the existence and direction of a particular effect, and for then refining those findings. Meta-analytic techniques are then more useful for more accurately quantifying the size of an effect. E.g., Mitchell, *supra* note 31, at text accompanying n.95 ("Meta-analytic reviews of experimental data are particularly useful in determining

Fourth, this “state of knowledge” approach illustrates one of the difficulties with a study-by-study analysis of the sort now-Chief Justice Rehnquist undertook in *Lockhart* and *Joiner*. In *Joiner*, Chief Justice Stevens’s partial dissent from the approach taken by Justice Rehnquist’s majority echoed the Eleventh Circuit’s discussion of that case and reflects many of the points made here. The thrust of that argument, as here, was that there is nothing inherently unscientific or unreliable about taking a “weight of the evidence” approach, relying on “all the studies taken together,” rather than the “separate studies and the conclusions of the experts.”²⁸⁶ I do not suggest that meta-analyzing the studies in *Joiner* would have solved the plaintiffs’ admissibility problems. But meta-analysis can be understood as a way to show when empirical evidence can be more than the sum of its parts (or less, of course, when the studies collected are methodologically unsound). Taking this approach may help illustrate the disingenuousness of looking at the evidence piece by piece *only*, looking solely at the trees and ignoring the forest.²⁸⁷

In related fashion, a more holistic approach might help address concerns that increased judicial discretion about the admissibility of expert testimony will lead to disparate outcomes, with different courts “admitting or excluding the same expertise.”²⁸⁸ Where quantitative syntheses of relevant bodies of work are available, there may be less picking and choosing among studies, as well as less disparity among outcomes, as experts should be more likely to rely on the same analyses of the relevant

the known parameters and effect sizes associated with behavioral phenomena”); cf. Robert J. MacCoun, *Epistemological Dilemmas in the Assessment of Legal Decision Making*, 23 LAW & HUM. BEHAV. 723, 725 n.3 (1999).

²⁸⁶Gen. Elec. Co. v. Joiner, 522 U.S. 136, 152–53 (1997) (Stevens, J., concurring in part and dissenting in part). Justice Stevens quoted the Court of Appeals for language that applies equally to the meta-analytic approach: “Opinions of any kind are derived from individual pieces of evidence, each of which itself might not be conclusive, but when viewed in their entirety are the building blocks of a perfectly reasonable conclusion.” *Id.* at 153 n.5.

²⁸⁷This is especially important given too great a reliance on statistical significance as the hallmark of scientific reliability. Justice Stevens agreed with the majority, for instance, that each of the studies plaintiffs’ experts relied upon was unpersuasive, in part because their results were not “statistically significant.” *Joiner*, 522 U.S. at 154 & n.8 (Stevens, J., concurring in part and dissenting in part). Conventionally, a result is “statistically significant” at the .05 level; that is, if the analysis indicates that the results obtained would likely have occurred by chance only 5% of the time. Too often, though, researchers and those who interpret their research adhere too rigidly to this “magical” .05 level for accepting results as “significant” or important. Jacob Cohen, *The Earth is Round (p < .05)*, 49 AM. PSYCHOL. 997 (1994); Robert Rosenthal & J. Gaito, *The Interpretation of Levels of Significance By Psychological Researchers*, 55 J. PSYCHOL. 33 (1963); Robert Rosenthal & J. Gaito, *Further Evidence for the Cliff Effect in the Interpretation of Levels of Significance*, 15 PSYCHOL. REP. 570 (1964). When only such results are deemed important enough to be accepted in social science, or “reliable” enough to be accepted in court, much valuable information may be lost or ignored—it makes little sense to credit findings when they are seen as 95% “certain,” but dismiss them when they are 90% or even 94% “certain.”

A related, potentially even more serious issue arises when researchers, interpreters, courts, or policy makers discount effect sizes that account for only small portions of the variance in a study. As has been pointed out for some time, even small effects can, in some circumstances, have profound importance. Robert Rosenthal & Donald B. Rubin, *A Simple, General Purpose Display of Magnitude of Experimental Effect*, 74 J. EDUC. PSYCHOL. 166 (1982); ROSENTHAL, *supra* note 277, at 132–36. I note below other statistical factors of which researchers and interpreters should be cautious. See *infra* note 312.

²⁸⁸Eleanor Swift, *One Hundred Years of Evidence Law Reform: Thayer’s Triumph*, 88 CAL. L. REV. 2437, 2472 (2000).

studies. Similarly, as next discussed, this approach lessens the problems involved when “the results of multiple experimenters are divergent or when the inferences to be made are not clear-cut.”²⁸⁹

Fifth, perhaps the most important benefit of a meta-analytic approach is the potential to identify *moderator variables*.²⁹⁰ Again analogizing to single studies, often various characteristics of the subjects (e.g., individual jurors) are of interest in how they might affect the outcome variables. A simple example is whether a mock juror’s race (or that of a defendant) might influence her decision-making about the defendant.²⁹¹ But when the body of this race literature is analyzed in toto, factors relating to each *study* might appear that explain some of the variation in findings.²⁹² For instance, although a meta-analysis of such studies lent overall support to the belief that race influenced sentencing decisions, specific factors were identified that clarified why some studies yielded stronger effects than others. The authors found that if the study was conducted outside the southern U.S., for instance, there was a substantial tendency, which nevertheless did not reach statistical significance, for the effect of the defendant’s race to be larger. Similarly, studies that specified the race of the subject or the victim yielded larger effect sizes.²⁹³ As another example, the gender difference meta-analysis above found that when a situation was presented by videotape, presumably more realistically, gender differences were far stronger than when subjects were simply asked via a phone or mail survey whether a certain behavior constituted sexual harassment.²⁹⁴ It also found that “recent studies appear to report *larger* gender differences than earlier studies, not smaller as one might expect from increased awareness of the problem of sexual harassment.”²⁹⁵ Where courts or commentators may rely more heavily on either more or less recent empirical work, depending on familiarity or accessibility, such findings may have very real policy implications.

Further, identifying moderator variables can help address a court’s perception that certain studies are irrelevant, whether singly or as a subset of a particular meta-analysis.²⁹⁶ The meta-analytic approach, of course, could be applied to the subset of cases the court finds relevant. Moreover, the meta-analyst may have identified and quantified particular subsets of her review, e.g., only studies of racial influence on murder verdicts or only

²⁸⁹Ronald Roesch, Stephen L. Golding, Valerie P. Hans & N. Dickon Reppucci, *Social Science and the Courts: The Role of Amicus Curiae Briefs*, 15 LAW & HUM. BEHAV. 1, 4 (1990).

²⁹⁰See ROSENTHAL, *supra* note 277, at 7–10 (discussing moderator variables); John E. Hunter & Frank L. Schmidt, *Cumulative Research Knowledge and Social Policy Formulation: The Critical Role of Meta-analysis*, 2 PSYCHOL., PUB. POL’Y, & L. 324, 330–31 (1996) (discussing the role of meta-analysis in theory development).

²⁹¹See Bowers et al., *supra* note 134, at 181–89 (collecting examples of such research).

²⁹²*E.g.*, Laura T. Sweeney & Craig Haney, *The Influence of Race on Sentencing: A Meta-analytic Review of Experimental Studies*, 10 BEHAV. SCI. & L. 179 (1992).

²⁹³*Id.* at 190.

²⁹⁴Blumenthal, *supra* note 129, at 44 tbl.7.

²⁹⁵*Id.* at 46. As noted there, however, methodological issues may have elicited this difference. *Id.*

²⁹⁶*E.g.*, McNeil-P.C.C., Inc. v. Bristol-Myers Squibb Co., 938 F.2d 1544, 1547 (2d Cir. 1991) (“Moreover, evidence at trial showed that only seven out of the thirty studies incorporated into the meta-analysis concerned acetaminophen. [The district court judge] therefore accorded the meta-analysis little or no weight.”).

gender difference studies using workplace stimuli presented by videotape, or presented enough data that such calculations could be made by another. These subsets could either identify the state of knowledge in a more narrowly defined relevant area or might identify the cases that most closely analogize to the case at bar and that are thus most relevant.²⁹⁷

Thus, despite the apparent, yet unfounded, disapproval by some courts of meta-analytic techniques,²⁹⁸ the procedure addresses a number of goals identified by judges as essential for the application of relevant social scientific work. Kansas State Judge Steve Leben, for instance, has identified specific criteria or examples of “what judges need” from psychological research in particular, and social science research more generally: “Current, up-to-date information”; “[b]alanced presentations, including opposing viewpoints and indicating where there are legitimate disputes and uncertainties; be up-front about the limits of current knowledge”; “[c]omprehensive reviews of the literature”; “[p]ractical suggestions about how to apply research findings in real-life situations, especially the courtroom”; and “[w]ell-considered criticisms of court actions and decisions that fail to take into account—or are contrary to—the best available research in the area.”²⁹⁹ As discussed above, meta-analysis addresses each of these needs: a complete quantitative review will contain all the studies conducted in an area up to the date of the review; doing so by definition will include contrary findings; it will also, through moderators and statistical corrections,³⁰⁰ identify potential reasons for these discrepancies and be able to suggest practical legal applications; and the comprehensive nature of the review, describing the full state of knowledge

²⁹⁷This is especially important in light of the discussion above of the piecemeal analysis conducted in *Lockhart* and *Joiner*. See *supra* notes 274–275 and 286–287 and accompanying text. A motivated judge or lawyer, of course, can distinguish just about any empirical study she wishes to on some ground or another, which can preclude consideration of that study or, at the most extreme, can condone the argument that a synthesis including such distinguished studies should be altogether excluded—a sort of “apples and oranges” argument. See *supra* note 286. This apples and oranges argument might arise in the context of *Daubert* analyses (which I discuss further below), where the objection is to the “fit” of the proposed synthesis, i.e., that because of the heterogeneity of methodologies or subject samples used in the studies in a synthesis, for instance, the overall analysis should be rejected.

Of course, this is simply a question of the level of generalizability one wishes to accept. As researchers have pointed out, apples and oranges are useful things to compare if one is trying to generalize to “fruit.” See Gene V. Glass, *In Defense of Generalization*, 1 BEHAV. & BRAIN SCI. 395 (1978). Similarly, if one is willing to accept the generalization across subjects that occurs within individual studies, one should be as willing to accept that which takes place across studies, where the statistical power and accuracy can be that much greater. See ROSENTHAL, *supra* note 277, at 129.

²⁹⁸One court has suggested that simply because a study quantitatively re-analyzed a body of work—regardless of the findings of that work—that quantitative study was unreliable. See *Allison v. McGhan Medical Corp.*, 184 F.3d 1300, 1315 (11th Cir. 1999) (upholding district court’s exclusion of an expert’s meta-analysis where the court “found the . . . study unreliable because it was a re-analysis of other studies that had found no statistical correlation”). I would suggest that this analysis is simply erroneous, because the precise point of aggregating studies, even ones that are not individually statistically significant, is the consequent ability to see the broader picture. See *In re Joint E. & S. Dist. Asbestos Litig.*, 52 F.3d 1124, 1134 (2d Cir. 1995) (reversing district court admissibility ruling that synthesizing non-significant studies could not achieve statistical significance); cf. *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829, 856–58 (3rd Cir. 1990) (“Paoli II”) (overturning exclusion of meta-analysis where exclusion was based on the study’s “unreliability”).

²⁹⁹Steve Leben, *Some Thoughts about Publishing in Psychology and Law*, Paper presented at the American Psychology-Law Conference (New Orleans, LA) (Mar. 9, 2000) (on file with author).

³⁰⁰Hunter & Schmidt, *supra* note 290 (noting the use of correction for sampling error to clarify discrepant or even apparently contradictory findings).

in an area, can identify specific cases or statutes that are supported by or run counter to social scientific knowledge.³⁰¹

Some of this focus on synthesizing research reflects suggestions made several years ago by Richard Lempert.³⁰² In a broader discussion of how and when law and policy might make use of empirical work in social science, Professor Lempert emphasized the distinction, among others, between syntheses of existing research—such as meta-analysis, though he did not use the term—and empirical studies involving the collection of original data.³⁰³ He correctly suggested that syntheses of research would be more influential in policymaking and in courts than would single studies. His discussion is worth quoting at length:

If research must be sought out, syntheses are more likely than studies to be influential. Syntheses collect and evaluate bodies of research so that the policy-maker interested in what social science can offer on a particular problem can get a good overview from a single source. Moreover, syntheses often “translate” research that might be too technical for the decision maker to understand into more easily comprehended language that captures the basic point of the study. From the standpoint of the quality of information given decision makers, the great advantage of syntheses is the insight they provide into the reliability of the results they report. If the synthesis is well done, the reader is alerted to the quantity and quality of research that supports different propositions. Juxtaposing different studies makes it clear where their implications conflict, and when conflicting studies are examined in the context of a body of related research, readers often get a good idea of which results are most likely to be aberrant as well as some sense of how seeming inconsistencies might be explained by some larger theory.³⁰⁴

Although much of this is true, the present discussion further develops Professor Lempert’s important points. Whether in published or testimonial form,³⁰⁵ the traditional syntheses to which he implicitly refers are narrative or qualitative, rather than the quantitative analyses I have been discussing. As alluded to earlier, such qualitative reviews of an empirical field can be

³⁰¹*E.g.*, Blumenthal, *supra* note 129, at 51–53 (advocating caution in the development of a new standard of proof for sexual harassment cases based on the low average gender differences found); Saks & Marti, *supra* note 133 (identifying flaws in Supreme Court case law on jury size based on quantitative review).

³⁰²Richard Lempert, “*Between Cup and Lip*”: *Social Science Influences on Law and Policy*, 10 *LAW & POL’Y* 167 (1988). Other recent proponents of applying syntheses of empirical research to legal issues are John Hunter and Frank Schmidt, long-time users of meta-analysis who have developed influential theories and methodologies for applying it. Hunter & Schmidt, *supra* note 290.

³⁰³Lempert, *supra* note 302, at 169. Professor Lempert’s terminology illustrates again why I classified even multi-experiment works as “single” studies. *See supra* note 276 and accompanying text. My distinction between meta-analysis and “single” study tracks his between synthesis and collection of original data—in either case we both mean “primary” studies rather than the synthesis of such primary studies.

³⁰⁴*Id.* at 175–76.

³⁰⁵Professor Lempert suggests that courts have been receptive to syntheses in the form of expert testimony. *Id.* at 172 (“At the trial level, courts for decades have been receptive to social science syntheses reported in the testimony of expert witnesses.”). He is certainly correct if “syntheses” is simply used to characterize expert testimony *qua* testimony, i.e., when an expert testifies to the accumulated general propositions regarding her field of expertise. But the receptivity is less clear when discrete syntheses, whether narrative or quantitative, are meant. *See, e.g., supra* note 285.

flawed, and thus the merits he describes may be overstated. I have mentioned, for instance, problems involved when reviewers do seek to “translate” and simplify primary empirical work into narrative form; much valuable information can be lost.³⁰⁶ Furthermore, narrative reviews are in fact often not always able to provide the necessary insight into the reliability of the primary studies they synthesize. Even when the size of a research universe is relatively small, a narrative reviewer simply cannot analyze in adequate depth every study she finds. When she does select among studies to include or review, the selection process may be subjective; “[r]elying on various personal and subjective theories and beliefs about methodological quality, reviewers often exclude[] all but a small number of studies as ‘methodologically inadequate’ and then base[] their reviews on only the remaining few studies.”³⁰⁷ In a sense, Professor Lempert is certainly correct that such reviews give a good sense “of the reliability of the studies they report”—the concern becomes simply how many and which do they report.

I do not at all suggest that primary studies are unimportant or unhelpful to the law. On the contrary, no useful synthesis (obviously) could be conducted without them. Moreover, they are essential for testing existing assumptions and for empirically identifying and documenting effects that might support or challenge those assumptions.³⁰⁸ Nor do I suggest that meta-analysis is some panacea that will wondrously resolve the tensions between social science and the law. But I do agree with Professor Lempert that “[l]egal decision makers should . . . be wary of relying heavily on single studies,”³⁰⁹ and that “single studies are at best a shaky reed for the policy-maker to lean on.”³¹⁰ My underlying point is that meta-analyses—quantitative analyses of a body of empirical research—achieve the goals Professor Lempert outlined better than do qualitative reviews, and certainly better than primary studies. They do so (1) by identifying and synthesizing a larger set of the research in question; (2) by evaluating each of the studies—that is, each of the “data points”—that enter into the review; (3) by facilitating the comparison or juxtaposition of different studies and the identification of “aberrant” or outlying studies; and (4) by identifying “moderator” variables that both can illustrate why a certain study or set of studies resulted a certain way and can generate further hypotheses to investigate.³¹¹

In brief,

a meta-analytic review can emphasize what factors should be taken into account when researchers seek to refine their experimental methods, with

³⁰⁶See, e.g., *supra* note 129 and accompanying text.

³⁰⁷Hunter & Schmidt, *supra* note 290, at 330.

³⁰⁸See *supra* note 285; *infra* text accompanying note 348.

³⁰⁹Lempert, *supra* note 302, at 176. Arguably, this is a concern with the recent rise in publication of primary empirical research in legal journals. The dissemination of such knowledge and data is important, but the presentation of single studies in such journals might bias legal academics' perception of a particular discipline.

³¹⁰*Id.* at 177.

³¹¹See *supra* note 290 and accompanying text.

one aim of increasing their acceptance by the courts. . . . [Moderator variables identified in a meta-analysis] can serve to inform not only subsequent empirical research, but also inferences about legal policy that are based on it.³¹²

³¹²Blumenthal, *supra* note 129, at 50–51.

A final brief point to note regarding meta-analysis is in the context of recent Supreme Court decisions addressing the admissibility at trial of expert “scientific, technical or other specialized knowledge.” FED. R. EVID. 702. The “trilogy” of these cases began with *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 579 (1993) (holding that Federal Rule of Evidence 702 governed the admissibility of such expert testimony in federal court, rather than the common law “general acceptance” test), and was further developed by *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 136 (1997) (holding that federal appellate courts are to apply an abuse of discretion standard when reviewing a district court’s admissibility ruling on such expert evidence) and *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 138 (1999) (extending *Daubert* factors to all expert evidence under Rule 702, not just “scientific” evidence). In *Daubert*, for instance, at issue was the admissibility of an expert’s unpublished reanalysis of the data in an existing, published study. His evidence, the recalculation of that published study’s data to find statistically significant results, was ruled inadmissible, primarily because his work had not been published or subjected to peer review. See *Daubert v. Merrell Dow Pharmaceuticals*, 727 F. Supp. 570, 575 (S.D. Cal. 1989). The Court of Appeals affirmed that ruling, noting that other Circuit Courts addressing the same Bendectin issues had ruled inadmissible unpublished reanalyses of epidemiological studies, especially in light of the “massive weight” of original published studies contradicting those reanalyses. *Daubert v. Merrell Dow Pharmaceuticals*, 951 F.2d 1128, 1130–31 (9th Cir. 1991).

This is not the context in which to analyze in depth *Daubert*, its progeny, and the scholarly debate it has generated. (For a good review of the trilogy, see Margaret A. Berger, *The Supreme Court’s Trilogy on the Admissibility of Expert Testimony*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE, *supra* note 6, at 9, 11–20.) However, because on their face, *Daubert* and other cases (see, e.g., *supra* note 285; *In re Paoli R.R. Yard PCB Litig.*, 706 F. Supp. 358, 373 (E.D. Pa. 1988)) might seem hostile to the use of meta-analysis in court, it may be useful to mention in passing several points at the intersection of meta-analysis and expert testimony. (The intersection need not, of course, be limited to these points. However, my focus herein is more to encourage the undertaking and presentation of meta-analytic research in law and social science research, less on its presentation at trial.)

Most simply, a party presented with an opponent’s expert testimony about a meta-analysis might object that the procedure is simply too “novel” or “unconventional,” *Daubert*, 509 U.S. at 592 n.11, to satisfy the *Daubert* criteria, as did the defendants in *Paoli I*. See *supra* note 277. As the discussion throughout this Section should make clear, however, there is simply no basis for this objection: meta-analysis is an accepted, traditional, reliable methodology in the social sciences. Because much of this discussion stems from the context of mass tort litigation and epidemiological studies, I might note that meta-analysis is appropriate for such studies as well, and for addressing some of the concerns courts have in such litigation. As one commentator recently noted in this context, “[m]eta-analysis is an exceptionally important method for summarizing data from both observational and experimental studies. It provides a scientific framework for summarizing evidence from studies done using different designs, at different times, and by different people. Meta-analysis may overcome some of the problems of low statistical power in the individual studies.” Diana B. Petitti, Book Review, 40 JURIMETRICS J. 363, 366 (2000) (reviewing FORENSIC EPIDEMIOLOGY: A COMPREHENSIVE GUIDE FOR LEGAL AND EPIDEMIOLOGY PROFESSIONALS).

Further, however, courts have been hesitant to accept the *recalculation* or *reanalysis* of existing data at trial (as was the case in *Daubert*), especially where the expert’s calculations were faulty or it was unclear how he arrived at his final values. See, e.g., *In Re Paoli R.R. Yard PCB Lit.*, 35 F.3d 717, 772–75 (3d Cir. 1994) (“Paoli III”) (under *Daubert*, affirming in part district court’s rejection of one expert’s recalculation of existing data). Three points should be made here. First, again, meta-analysis is not a reanalysis of existing data, but a synthesis and then an analysis of the synthesized data. (To be entirely accurate, re-analysis of a study’s *results* may be warranted in a meta-analysis when the author of a primary study (i.e., one being meta-analyzed) failed to provide explicit values to enter the analysis, but nevertheless such information is implicit elsewhere in the study. See generally ROSENTHAL, *supra* note 277, at 102–03. This in fact occurs often, but the more general point in the text is what is important.)

Second, whether the expert presents testimony about reanalyzed or meta-analyzed data, courts can in fact be vigilant about the quality of that testimony: when the expert’s reanalysis is demonstrably false, for instance, it may be rejected as unreliable. See *supra* Paoli III. Similarly, when the mathematical or statistical efforts an expert engages in while conducting or presenting a meta-analysis are demonstrably incorrect, the testimony’s reliability is questionable. DeLuca by DeLuca v. Merrell Dow Pharmaceuticals, Inc., 791 F. Supp. 1042, 1047–59 (D.N.J. 1992) (rejecting meta-analytic-type testimony from an expert where such errors were demonstrable).

V. REMAINING DILEMMAS

Increased training and conducting meta-analyses will aid communication and the effective integration of theory and research across the boundaries of law and social science. But social scientists should not see such steps as a panacea that will instantly lead to the social scientizing of the law. There are fundamental differences between the disciplines that might still preclude the use of even sophisticated social science research in the legal system.

A. DIFFERENT VALUE SYSTEMS

First, most critically, “[l]aw and science do not have an identity of interests nor do they share objectives.”³¹³ Professor Tanford has argued that the two fields are in fact “rival systems,” at least in their approaches to gathering knowledge and resolving questions about what constitutes the “truth.”³¹⁴ Although he disagrees in part with Professor Haney’s assertions, he cites the professor’s distinctions between the values held by social science and the law:

(1) social science is innovative, while law resists innovation, (2) social science is based on data and observation, while law is based on precedent and hierarchy, (3) social science seeks an objective answer to problems, while law seeks an adversarial victory, (4) social science is descriptive, while law is prescriptive, (5) social science is nomothetic, while law is idiographic, (6) social science conclusions are probabilistic and tentative, while legal conclusions are irrevocable and must appear certain, (7) social science is proactive, while law is reactive, and (8) social science is abstract, while law deals with concrete issues.³¹⁵

These differences can lead to two quite different implications for the use of social science in law. On the one hand, Professor Tanford suggests that social science must recognize these differences and not expect findings that run counter to the law’s values to significantly influence the law’s practices.³¹⁶ Although this is superficially quite discouraging to social

Third, in related fashion, criteria specific to meta-analyses can be identified by which to evaluate a meta-analysis, whether at trial or in publication, i.e., over and above the *Daubert* or Rule 702 factors. For instance, such analysis by definition explicitly involves the selection, synthesis, and weighting of the available studies in an area, and the degree to which an analysts makes explicit her criteria and methods for doing so is one important way of evaluating her study. Thus, the publication status of a meta-analysis, to use one of the *Daubert* factors as an example, may be somewhat less important than the success in which it articulates the various criteria it used for selecting, weighting, analyzing, and inferring from the studies it reviewed. These are some factors a peer reviewer might use in evaluating a meta-analysis, and are viable ones for a judge to use when a proponent seeks to use one in court. *E.g.*, *Flue-Cured Tobacco Co-op. Stabilization Corp. v. U.S. E.P.A.*, 4 F. Supp. 2d 435, 459 (1998).

³¹³Faigman, *supra* note 21, at 669. *See also* David L. Faigman, Commentary, *Embracing the Darkness: Logerquist v. McVey and the Doctrine of Ignorance of Science is an Excuse*, 33 ARIZ. ST. L.J. 87, 88 (“Science is merely a tool that the law can and must use to achieve its own objectives.”) (citation omitted).

³¹⁴*See* Tanford, *supra* note 10, at 156.

³¹⁵*Id.* at 156 (quoting Haney, *supra* note 24, at 159–68). *See also* Joelle Anne Moreno, *Beyond the Polemic Against Junk Science: Navigating the Oceans that Divide Science and Law with Justice Breyer at the Helm*, 81 B.U. L. REV. 1033, 1063 & n.172 (2001) (noting similar distinctions).

³¹⁶Professor Tanford suggests that “[s]cience must reflect some of the same values as a particular body of law. The more the two value systems converge, the more completely will law accept the

scientists, a subtle distinction he makes leaves perhaps some room for optimism: deliberately or not, he distinguishes between “law” accepting science findings and “judges” accepting them—analogous either to an abstract change in values versus a practical change in court use of findings or to legislative versus judicial acceptance of such findings. In either the judicial or the legislative context, it is likely that the acceptance of new data will depend less on the data and more on the recipient.³¹⁷ Thus, social science findings that diverge from traditional legal values may not necessarily be excluded—a lawyer simply has to find the “right” judge or legislator.

But from a second perspective, such divergent values are precisely what should motivate social scientists to advocate the use of their findings. Consistent with the recurring perception of social science as a vehicle for legal and political reform,³¹⁸ Gary Melton, one of the founders of the modern legal psychology discipline, has argued that political advocacy by social scientists is normatively justified.³¹⁹ Using the nomination of Judge Robert Bork to the U.S. Supreme Court as an example, Professor Melton argued that social science promotes human dignity, a sense of community, and other values fundamental to the Constitution, in contrast to the values Judge Bork and other law-and-economists espoused, especially wealth maximization.³²⁰

This approach was criticized, however,³²¹ and it is more typically assumed that, “[p]roperly understood and properly used, valid social science research alone interposes no particular ideological agenda on the law.”³²² It is also clear that, when properly conducted, social science research may be motivated by a desire for reform; it is only a concern when the interpretation of that research is driven by one’s agenda.³²³

B. MULTIPLE DECISION FACTORS

Understanding that the legal system must consider values different from those of social science is also illustrated at the more concrete level of judicial decision-making. In particular, a judge seeking to resolve the case at bar must consider “process values” such as finality, efficiency, or

science. The more the normative structures diverge, the greater will be the tendency of judges to reject the science.” Tanford, *supra* note 10, at 167.

³¹⁷Richard E. Redding & N. Dickon Reppucci, *Effects of Lawyers’ Socio-political Attitudes on Their Judgments of Social Science in Legal Decision Making*, 23 LAW & HUM. BEHAV. 31, 51 (“When the evidence conflicts with judges’ attitudes about the social science issue in question, they are likely to give less weight to such evidence. Conversely, when the evidence is consistent with their attitudes, they are likely to give it greater weight.”).

³¹⁸*See generally* Fox, *supra* note 104.

³¹⁹Gary B. Melton, *Law, Science, and Humanity: The Normative Foundation of Social Science in Law*, 14 LAW & HUM. BEHAV. 315, 315 (1990) (suggesting that social scientists’ organized opposition to the Supreme Court nomination of Robert Bork was justifiable).

³²⁰*Id.*

³²¹Mark A. Small, *The Normative Foundation of Social Science in Law Revisited: A Reply to Melton*, 15 LAW & HUM. BEHAV. 325 (1991).

³²²Faigman, *supra* note 101, at 1014.

³²³*Cf.* Macey, *supra* note 170, at 172–73 (noting benefit of “neutrality” in law and social sciences).

accuracy.³²⁴ Thus, even showing that a court misused, or failed to use, available scientific evidence does not necessarily “support the opposite conclusion that the Court should have rested its decision on the research.”³²⁵ As Professor Tanford points out, when courts do not use data, it does not necessarily mean they did not understand the research—they may simply be concerned with different factors:

[A researcher] once expressed disappointment that the Court only selectively used his data on the effect of reducing jury size. He assumed the Justices did not understand his research. A more likely explanation is that the data were irrelevant. [He] was researching what effect jury size had on the quality of the verdict, while the Court was concerned with the symbolism of using smaller juries.³²⁶

Such concern may not even imply a rejection of the data in question—even where a court’s decision does not conform to the research submitted to it, it does not necessarily reject or even disregard that research; it may even accept it as scientifically valid.³²⁷ This is so because courts must also consider more explicit legal factors such as precedent, the substantive law, and constitutional values. First, it takes prodigious effort and confidence for a judge to overturn precedent based on empirical findings. Recall the discussion above of *Brown v. Board of Education*, where the social science findings were relegated to a footnote because the issue indeed turned on, and had to be presented as grounded in, substantive legal principles. This could be framed as an example of using social science where it conforms to a judge’s previous conceptions or attitudes,³²⁸ but it is not necessarily a flaw for courts to look to precedent rather than data. To the extent that people need to know what law is and have settled expectations about it, and in order to prevent the law from changing every time a new study is presented to a particular judge,³²⁹ reliance on precedent is useful.³³⁰

³²⁴E.g., Robert G. Bone, *The Process of Making Process: Court Rulemaking, Democratic Legitimacy, and Procedural Efficacy*, 87 GEO. L.J. 887, 913 (1999).

³²⁵Faigman, *supra* note 21, at 679–80.

³²⁶Tanford, *supra* note 10, at 165 (footnotes omitted).

³²⁷See *McCleskey v. Kemp*, 481 U.S. 279, 292 n.7 (1987) (assuming research proffered by petitioner was “statistically valid,” but nevertheless rejecting petitioner’s constitutional claims). Thomas Grisso & Michael J. Saks, *Psychology’s Influence on Constitutional Interpretation: A Comment on How to Succeed*, 15 LAW & HUM. BEHAV. 205, 206 (1991).

³²⁸E.g., *Carter v. Kentucky*, 450 U.S. 288, 302–03 (1981) (relying on both precedent and intuition for proposition that jurors comply with certain limiting instructions).

³²⁹See *supra* note 101.

³³⁰The Supreme Court has grappled with this explicit issue. At times, as in *Carter*, *supra* note 328, the Court has explicitly rejected data in favor of precedent. See also *Barefoot v. Estelle*, 463 U.S. 880, 896 (1983) (rejecting empirical evidence on therapists’ inability to predict future dangerousness as “contrary to [Court’s own] cases”). But see *infra* Section V(C) (discussing why having judges articulate reasons other than data as the basis for their decisions can be a benefit). In other instances, Justices have suggested that the Court might be open to revising its decisions in light of subsequent data. For instance, in the context of deciding whether creating a good-faith exception to the exclusionary rule would reduce deterrence of unconstitutional behavior by police, *United States v. Leon*, 468 U.S. 897 (1984), Justice Blackmun suggested that where empirical evidence was not decisive in one direction or the other, an “empirical judgment . . . necessarily is a provisional one If it should emerge from experience that . . . the good faith exception . . . results in a material change in police compliance...we shall have to reconsider what we have undertaken here. The logic of a decision that rests on untested predictions...demands no less.” *Id.* at 928 (Blackmun, J., concurring). One should note, however, that what might change his mind in the future was not empirical data, but “experience.”

Second, there are instances where even established, rigorous empirical research may nevertheless conflict with fundamental constitutional values.³³¹ For instance, it has long been known by social and political psychologists that people are easily manipulated, do not consider in depth the content of messages presented to them, focus on extra-message cues, and have predictable individual differences in their persuasibility and their susceptibility to all of these biases.³³² People consider complex messages less thoroughly than simple messages.³³³ And people are differently persuaded³³⁴ and articulate different beliefs, attitudes, and opinions³³⁵ depending on whether they are in a positive or negative mood, e.g., based on such minor differences as whether they just saw a happy or sad movie³³⁶ or whether it is a sunny day or not.³³⁷

But despite clear empirical evidence of people's susceptibility to false messages, the law does not limit people's exposure to speech, even speech that society considers false, unpleasant, or advocating hurtful goals. Under the First Amendment's right to "free speech," society leaves this to the marketplace of ideas and Justice Holmes's assumption that the truth will win out.³³⁸ Despite clear empirical evidence of the influence of mood on judgment, we do not bar people from seeing, nor require them to watch, *Jaws* or *Sophie's Choice* immediately before entering the voting booths, nor do we hold public elections only on sunny, or rainy, days. Despite knowing that people can easily be persuaded even by false or hurtful ideas, or that weather affects people's articulated beliefs, or that people have a tendency

Moreover, elsewhere, Justice Blackmun suggested that despite empirical studies contrary to an earlier opinion, the Court should "decline to reconsider" that earlier opinion based simply on the data. See *Ballew v. Georgia*, 435 U.S. 223, 231-32 n.10 (Blackmun, J., plurality opinion).

³³¹E.g., *Craig v. Boren*, 429 U.S. 190, 204 (1976) (Brennan, J.) (suggesting that "proving broad sociological propositions by statistics is . . . in tension with the normative philosophy that underlies the Equal Protection Clause").

³³²See, e.g., Shelly Chaiken & Durairaj Maheswaran, *Heuristic Processing Can Bias Systematic Processing: Effects of Source Credibility, Argument Ambiguity, and Task Importance on Attitude Judgment*, 66 J. PERSONALITY & SOC. PSYCHOL. 460, 460-62 (1994); Shelly Chaiken, Akiva Liberman & Alice H. Eagly, *Heuristic and Systematic Information Processing Within and Beyond the Persuasion Context*, in UNINTENDED THOUGHT (James S. Uleman & John A. Bargh eds., 1989).

³³³Carolyn L. Hafer, Kelly L. Reynolds & Monika A. Obertynski, *Message Comprehensibility and Persuasion: Effects of Complex Language in Counterattitudinal Appeals to Laypeople*, 14 SOC. COGNITION 317, 317 (1996).

³³⁴Diane M. Mackie & Leila T. Worth, *Feeling Good, But Not Thinking Straight: The Impact of Positive Mood on Persuasion*, in EMOTION AND SOCIAL JUDGMENTS. INTERNATIONAL SERIES IN EXPERIMENTAL SOCIAL PSYCHOLOGY 201 (Joseph P. Forgas ed., 1991).

³³⁵Joseph P. Forgas & Stephanie Moylan, *After the Movies: Transient Mood and Social Judgments*, 13 PERSONALITY & SOC. PSYCHOL. BULL. 467, 467 (1987). Cf. Jeremy A. Blumenthal, *Does Affect Induction Influence Moral Reasoning?*, Poster presented at American Psychology/Law Society Conference, Redondo Beach, CA (Mar. 1998) (on file with author).

³³⁶Forgas & Moylan, *supra* note 335, at 467.

³³⁷Norbert Schwarz & Gerald L. Clore, *Mood, Misattribution, and Judgments of Well-being: Informative and Directive Functions of Affective States*, 45 J. PERSONALITY & SOC. PSYCHOL. 513, 513 (1983).

³³⁸See *Abrams v. United States*, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting) ("the best test of truth is the power of the thought to get itself accepted in the competition of the market"). Justice Holmes argued that "if there is any principle of the Constitution that more imperatively calls for attachment than any other it is the principle of free thought—not free thought for those who agree with us but freedom for the thought that we hate." *United States v. Schwimmer*, 279 U.S. 644, 654-55 (1929) (Holmes, J., dissenting).

to believe that new information is true,³³⁹ society and the law value established constitutional rights over empirical data.³⁴⁰

C. FORCING LAW'S HAND

In all these instances of privileging law's values rather than social science's, however, there is a sense of social science "calling the legal system's bluff." That is, there is a very real benefit to presenting social science research even when the law bases its decision on these alternative factors, "forcing" a deciding court to articulate more precisely the legal and policy basis for its decision. Indeed, for some commentators, whether or not the proposed research is accepted by the court, the benefit inheres in "compel[ling] judges to act like judges, stating clearly the fundamental values and normative premises on which their decisions are grounded, rather than hiding behind empirical errors or uncertainties."³⁴¹ Professors Meares and Harcourt, for instance, have recently advocated an explicit turn to empirical social science evidence as a "crucial element in constitutional decision-making" to allow for more "transparent" decision making, at least in the case of constitutional criminal procedure.³⁴² These authors see a lack of clarity in the "interpretive choices" underlying Supreme Court Justices' recently written opinions in the area, and suggest that explicitly referencing existing data and social science research may "in fact expose the decision-making process to further criticism from advocates and the public."³⁴³ Indeed, for these authors "it is precisely the exposure of the underlying social science that will afford more accountability and transparency, and may allow for more criticism and revision. In some cases, social science may counteract bias, or at least highlight it."³⁴⁴ The hope becomes that presenting a court with sound empirical data may lead the judge to rely less on the "pages of human experience,"³⁴⁵ and more on those (or alternative) data. Again, because of the precedential nature of judicial opinions, assumptions about human behavior that are relied upon by a court become binding and are overturned in rare circumstances. When the presentation of empirical work can prevent the reliance on—and thus the reification in precedent of—unreliable assumptions or intuitions, social science will have accomplished an important goal.³⁴⁶

³³⁹E.g., Daniel T. Gilbert, Romin W. Tafarodi & Patrick S. Malone, *You Can't Not Believe Everything You Read*, 65 J. PERSONALITY & SOC. PSYCHOL. 221, 221 (1993).

³⁴⁰Recall Professor Cahn's reluctance to have constitutional rights decided by empirical research, *supra* note 100.

³⁴¹Grisso & Saks, *supra* note 327, at 208.

³⁴²Tracey L. Meares & Bernard E. Harcourt, *Foreword: Transparent Adjudication and Social Science Research in Constitutional Criminal Procedure*, 90 J. CRIM. L. & CRIMINOLOGY 733, 735 (2000).

³⁴³*Id.* at 797.

³⁴⁴*Id.*

³⁴⁵*Parham v. J.R.*, 442 U.S. 584, 602 (1979).

³⁴⁶*See* Grisso & Saks, *supra* note 327, at 208–10.

VI. SUMMARY AND CONCLUSION

I began this article by noting the recent increase in legal scholarship that makes use of social scientific and empirical theory, research, and data, and that presents such scholarship as a new beginning and a new opportunity to revamp the law's understanding of human behavior.³⁴⁷ I noted the potential for surprise at this increase, due both to the historic tensions between social science and the law, and to an understandable perception among social scientists that what the law sees as "new" is precisely the work they have engaged in for decades.

Using a historical review of the interactions between law and psychology, I highlighted some of these tensions, and reviewed some specific examples of scholars from each discipline failing to appreciate the other. But, despite a somewhat critical tone or choice of language in these Sections, I certainly did not intend a diatribe against either discipline. I am indeed critical of some of the ways in which some members of the legal system have considered social scientific data. Similarly, I share with others a disappointment in some of the approaches taken by social scientists in our efforts to have those data used. Finally, despite specific suggestions for training, education, communication, and the conduct and presentation of interdisciplinary research, I agree that there are fundamental value judgments asserted by each discipline that render such communication difficult at times.

Nevertheless, I am entirely optimistic about the role of social science in the law, and my extended discussion of training, joint authorship, and especially the use of meta-analysis illustrates some specific ways in which I see the possibility for more communication between the disciplines. Moreover, I see such increased, and improved, communication between members of the legal system and members of the social science community as a positive and necessary step for multiple reasons.

First, as implied throughout this Article, the legal system is fundamentally based on assumptions about human behavior. Importantly, framing these assumptions as research questions allows them to be empirically evaluated. In particular, psychology—the science of human cognition and behavior—is in a unique position to explicitly test those assumptions and thus support or challenge the mental or behavioral basis of many aspects of the legal system.³⁴⁸ Research in law and social science

³⁴⁷Korobkin & Ulen, *supra* note 1, at 1058 n.24 (calling for "a new scholarship in law based on behavioral science"); Jolls et al., *supra* note 1, at 1474 (noting "fertile ground for further research" and suggesting "directions in which that research might go"); Posner, *supra* note 27 ("providing a framework for analyzing the relationship between law and the emotions").

³⁴⁸Ogloff, *supra* note 1, at 467 ("[L]egal psychologists are interested in evaluating the assumptions that the law must make about human behavior"). Nor is this a new perspective:

Psychology's primary contact with law lies in its possible substantiation or contradiction of the frequent psychological assumptions made by the courts in formulating legal rules of conduct. That is to say, when a court makes an assumption with respect to how individuals behave under particular circumstances it is making an assumption which the data of psychology may corroborate or contradict. . . . In many fields of the law the courts are making psychological assumptions . . . which the present development of psychology makes

broadly, and in psychology and law in particular, recognizes that the goal of the legal system is to guide and constrain our actions and interactions in society. This guidance can only be helped if done with as full an understanding as possible of the contextualized human behavior that goes into such actions and interactions.

Second, improved communication can help remedy many of the concerns noted throughout this and similar appraisals of such interdisciplinary work. Interdisciplinary training will encourage a mutual appreciation and understanding of the substance and procedure in each field. Collaborations between legal scholars and social scientists can take this even further, yielding methodologically sound empirical tests of specific, relevant legal doctrine. Publication by scholars in each discipline in the other's journals should continue, and should include discussions of how the fields can best communicate. And scholars in each discipline should seek to understand and appreciate the research methodologies of the other.

Finally, and most ambitiously, such increased and improved dialogue between disciplines, with the consequent refinement of the ways in which the legal system shapes, guides, and controls society's interactions, can only help move us toward a more just system. Each recent review of psycholegal research has emphasized these words:

Perhaps a basic challenge for [social science] in its interactions with legal and social process is to bring relevant knowledge and skills to bear on major social inequities so that the policies and practices in our society can more truly "comport with the deepest notions of what is fair and right and just."³⁴⁹

it worth while for the law to collect and test in the light of such facts as psychology is now prepared to offer.

CAIRNS, *supra* note 68, at 173–74.

³⁴⁹Saleem Shah, *Dangerousness: A Paradigm for Exploring Some Issues in Law and Psychology*, 33 AM. PSYCHOL. 224, 236 (1978). One early reviewer of the present article responded to this quotation with the obvious question: "But can psychology—or social science in general—tell us what these notions are?" In fact, much recent debate has turned on exactly that question. *E.g.*, compare ROBINSON & DARLEY, *supra* note 268 (suggesting that empirical research can helpfully identify the public's intuitions about justice), with Denno, *supra* note 268 (criticizing Robinson and Darley's book and research) and Slobogin, *supra* note 268 (same). See also Faigman, Commentary, *supra* note 313, at 88 ("Science cannot dictate what is fair and just.").