

USING EXPERIMENTAL ECONOMICS TO PEEK INTO THE “BLACK BOX” OF JURY BEHAVIOR: A PROPOSAL FOR JURY RESEARCH REFORM

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I. INTRODUCTION

What’s going on in the mind of a juror? This is, of course, a topic of frequent debate among litigants, lawyers, psychologists, and policy-makers. While jury behavior is rarely as shocking as that displayed in the recent trial (or more properly, mistrial) of former Tyco executives L. Dennis Kozlowski and Mark H. Swartz, during which a juror surprisingly appeared to display her sympathies toward one of the parties,¹ this fact-finding mechanism has an extensive history of interest and scrutiny. Despite years of discussion and research, how close have we moved toward a truly useful understanding of the process? Has it been enough to secure the American jury in the public eye as a reliable tool of the judicial system, and can we do more?

These are difficult questions to be sure. It is fair to say that United States juries, or more specifically “petit juries,”² present one of the most interesting and significant challenges for understanding human behavior. Juries have long been an integral part of justice in the United States, deciding not only guilt or innocence in dramatic criminal cases, but also making critical fact decisions in dry but financially significant corporate

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¹ “In touching her thumb to her forefinger and appearing to flash the ‘O.K.’ sign to defense lawyers Friday, a juror in the trial of two former Tyco executives may have made the most expensive hand gesture in the history of criminal law.” Adam Liptak & Andrew Sorkin, *Emergence of Juror Leaves Tyco Judge in Legal Quandary*, N.Y. TIMES, Mar. 28, 2004, at 1.

² Petit juries (also known as “trial juries” or even “petty juries,” as opposed to “grand juries”) have a longstanding tradition in English law as a relatively small group of persons from the community empanelled to decide factual issues. See *Colgrove v. Battin*, 413 U.S. 149, 176–77 (1973) (citing Wells, *The Origin of the Petit Jury*, 27 L. Q. REV. 347 (1911)) (noting that the use of petit juries has been described at least as early as 1164). The name “petit” is derived from the French term for small and refers to the size of the jury panel, rather than its significance. See GODFREY LEHMAN, *WE THE JURY...THE IMPACT OF JURORS ON OUR BASIC FREEDOMS* 14–15 (1997).

cases.³ With the apparent pervasiveness of litigation in our society, it is reasonable for anyone to consider the possibility of confronting six to twelve of their nominal “peers” sitting in judgment (though few cases actually proceed to that point). But the prominent position held by the American petit jury is also subject to concern, disparagement, and outright fear due to the general perception that juries are inherently subject to an unpredictable mingling of negative biases and other preconceptions.⁴ Whether this concern derives from the average juror’s background, education level, socioeconomic status, or the ability to decide emotional or complex questions without the grounding in law that guides the judgment of judges and lawyers,⁵ it is most certainly a real and persistent problem that many have sought to address.

Unfortunately, while the ability to lift the fog surrounding jury decision-making is phenomenally important, it is frustratingly hard to achieve. In general, efforts to succinctly identify the elements that affect jury verdicts have met with mixed success. To a great extent, this is a product of the investigative methods used. The literature is replete with both criticisms⁶ and defenses⁷ of existing studies, but very little in the way of any new ideas as to how to improve this body of work.⁸

³ Of course, the perceived division between corporate and criminal law may be very narrow in the minds of most jurors these days (see Charles Kauffman, *Jurors Carry Negative Presumptions*, NAT’L L.J., Jan. 19, 2004, at S1); and the divide has certainly not increased in the wake of the Enron, Tyco and WorldCom debacles (among others, unfortunately).

⁴ Whether the fears are out of proportion with reality is an open question. Though some might argue that concerns are unwarranted, at least one study states that juries are actually *less* accurate at fact finding than most people believe. See Hal Arkes & Barbara Mellers, *Do Juries Meet our Expectations?*, 26 L. & HUM. BEHAV. 625, 637 (2002) (“Even though jury decisions are highly regarded methods for determining justice, juries make mistakes—far more than most of us think.”).

⁵ See Jeffrey W. Stempel, *A More Complex Look at Complexity*, 40 ARIZ. L. REV. 781, 795 (1998) (“More complex cases may resist logical analysis, particularly for lay jury fact finders. Some of this may result from the heuristic biases humans have in assessing information—information processing problems that are thought to be reduced in judges and special masters due to their legal training but which cannot be eliminated.”).

⁶ See, e.g., Julius Cohen, *Factors of Resistance to the Sources of Behavioral Sciences*, 12 J. LEGAL EDUC. 67, 68 (1959) (discussing the difficulty in translating research from the behavioral sciences to the practical legal environment and noting, among the primary reasons that such research is perceived as inadequate, “the resources of the behavioral sciences have not been shaped to answer many specific and practical problems with which the law is concerned” and “the feeling the these resources have yielded findings that are much too unripe and too tentative for reliable use in predicting human behavior”); Shari Diamond, *Illuminations and Shadows from Jury Simulations*, 21 L. & HUM. BEHAV. 561, 566 (1997) (While concluding after reviewing the results of more detailed modern jury studies that “we can take some comfort that our efforts to invest more resources in the jury simulation paradigm have been justified,” also acknowledging that “even these more elaborate simulations cannot avoid some of the inevitable uncertainties that research can reduce but not avoid.”); Ronald Dillehay & Michael Nietzel, *Constructing a Science of Jury Behavior*, in REV. PERSONALITY & SOC. PSYCHOL. 253–54 (L. Wheeler ed., 1980) (discussing the problems with common jury research methods and stating that “We are skeptical that the prototypical jury analogue is capable of capturing the complex socialization processes which are produced by the jury experience.”).

⁷ See, e.g., Norbert Kerr, David R. Nerenz & David Herrick, *Role Playing and the Study of Jury Behavior*, 7 SOC. METHODS & RES. 337, 350–51 (1979) (arguing, based on experimental data, that mock jury studies have external validity); Michael J. Saks, *What do Jury Experiments Tell Us About How Juries (Should) Make Decisions?*, 6 S. CAL. INTERDISC. L.J. 1, 3–9 (1997) (reviewing various experimental techniques for studying juries and asserting that, while there are shortcomings to all methods, they are no different than those faced by any other field of human experimental research); Brian Bornstein, *The Ecological Validity of Jury Simulations: Is the Jury Still Out?*, 23 L. & HUM. BEHAV. 75, 88 (1999) (concluding that jury simulation research is generally translatable to real-world jury behavior). See Valerie Hans & Stephanie Albertson, *Empirical Research and Civil Jury Reform*, 78

This Article is a significant departure from traditional jury research analysis.⁹ It presents a different perspective on the research to date and suggests ideas for improvement from an unexpected source: experimental economics. Specifically, in Part II, the Article places in context the modern concerns about juries in the United States and the need for accurate research. Next, in Part III, the Article reviews existing studies with an eye toward why they are incapable of fully resolving discontent with the jury system. In Part IV, the Article explains the contribution of economics research and the specific methodology it provides that can make jury research more accurate. Finally, Part V outlines the basics of an example experiment that can be used as a model to test the theory.¹⁰

II. THE PROBLEM AND CONSEQUENCES OF JURY UNPREDICTABILITY

While some may welcome a jury trial as a way to make a questionable legal case more viable by focusing on sympathetic facts with a human interest component, it is fair to say that more litigants have concerns about the prospect of leaving important issues in the hands of six to twelve people¹¹ they have never met and essentially know nothing about.¹² The trepidation can be so profound that it may serve as a primary motivator for

NOTRE DAME L. REV. 1497, 1502–03 (2003) (“In recent decades, developments in legal scholarship and various academic disciplines have fostered interdisciplinary and collaborative research. This climate has encouraged social scientists and legal scholars to undertake more legally sophisticated jury research. Although unrealistic jury simulations are still published, there are increasing numbers of jury simulations of high verisimilitude.”).

⁸ A notable exception is the reemergence of studies using jurors in actual cases. See William J. Bowers, *The Capital Jury Project: Rationale, Design, and Preview of Early Findings*, 70 IND. L.J. 1043, 1077 (1995) (Detailing the “Capital Jury Project,” a multidisciplinary study of how capital jurors make their life or death sentencing decisions); Valerie 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, 365–66 (1999) (detailing early results of the Arizona Jury Project, a semi-controlled study of the effect of allowing jurors to discuss the case during trial). While not exactly “new,” this is a type of jury research that has traditionally had a very limited application due to some early political missteps. See *infra* notes 45–50 and accompanying text.

⁹ The authors believe the ideas underlying this research stream to be sufficiently novel, non-obvious and useful to qualify for patent protection. Thus, a provisional patent application has been filed by the Pennsylvania State University on the authors’ method and is currently pending at the United States Patent & Trademark Office (documentation on file with the authors and the Intellectual Property Office of the Pennsylvania State University, University Park, Pa).

¹⁰ A forthcoming companion paper will detail a specific experimental method and provide the results of studies conducted with mock jury participants. Results to date have been extremely positive. Initial studies have been completed which clearly indicate that the application of the experimental economics concepts described herein have a statistically significant effect on mock jury behavior (data on file with the authors).

¹¹ Since a couple of 1970s Supreme Court decisions paved the way for juries of fewer than twelve persons, many court systems have employed smaller juries as a means of controlling costs. See *Colgrove v. Battin*, 413 U.S. 149, 157–58 (1973) (affirming a local federal rule of civil procedure allowing less than twelve jurors); *Williams v. Florida*, 399 U.S. 78, 102–03 (1969) (affirming a state statute allowing fewer than twelve jurors). There has been considerable commentary on whether these smaller juries are as effective or fair. See, e.g., Richard O. Lempert, *Uncovering “Nondiscernable” Differences: Empirical Research and the Jury-Size Cases*, 73 MICH. L. REV. 643 (1975); Michael J. Saks, *The Smaller the Jury, the Greater the Unpredictability*, 79 JUDICATURE 263 (1996); Hans Zeisel, *...And Then There Were None: The Diminution of the Federal Jury*, 38 U. CHI. L. REV. 710 (1971).

¹² See, e.g., SAUL KASSIN & LAWRENCE WRIGHTSMAN, *THE AMERICAN JURY ON TRIAL: PSYCHOLOGICAL PERSPECTIVES* 12–14 (1988); Kevin Livingston, *Junking the Jury?*, THE RECORDER, Oct. 19, 1999, at 1.

early settlement (at least for the party that has the most negative perception of the jury).¹³ Alternatively, parties may try to blunt the jury's most dangerous tendencies by working to exclude seemingly visceral facts, introduce voluminous and complicated side issues, or employ arguments finely crafted by jury consultants for the greatest advantage.¹⁴ At base, most litigants view jury trials as a complex hazard that must be specifically addressed in the larger context of the litigation.¹⁵

Why do juries inspire such fear?¹⁶ After all, the jury has historically been considered the buffer against an elitist and political judiciary.¹⁷ As the arbiter of significant factual issues that require subjective assessment,¹⁸ a panel of one's peers should theoretically be optimal at fairly judging the credibility of the litigants and their witnesses, as well as arriving at the most even-handed result. Why, then, does it seem that juries have lost their veneer of equity over the years, bringing the desirability of their very participation in the judicial process into question?

A number of specific concerns—whether real or merely perceived—appear to be at the root of this general apprehension. Among them, the possibility of outright bias against one of the litigants is perhaps the most worrisome jury failing; indeed, if truly present, it could preclude any chance at an objective resolution to the dispute.¹⁹ One form of bias is a juror's negative opinion about a specific party, which is particularly likely to occur when negative publicity regarding relevant acts is circulated.²⁰ Additionally, it is possible for a general bias to exist against the type of

¹³ See, e.g., Theodore Eisenberg, Neil LaFountain, Brian Ostrom, David Rottman, & Martin T. Wells, *Juries, Judges, and Punitive Damages: An Empirical Study*, 87 CORNELL L. REV. 743, 767 (2002). To some extent, those fears may be unfounded, but the perception nonetheless exists. *Id.* at 768. See Herbert M. Kritzer, *Public Perceptions of Civil Jury Verdicts*, 85 JUDICATURE 78, 82 (2001) (survey results demonstrating that the public believes jury verdicts to be higher than they actually are, but the magnitude of the error is less than most people think).

¹⁴ See, e.g., Arthur H. Patterson & Nancy L. Neuffer, *Removing Juror Bias by Applying Psychology to Challenges for Cause*, 7 CORNELL J.L. & PUB. POL'Y 97 (1997). Of course, not all parties have all of these weapons in their arsenal—as with many aspects of litigation in the United States, those with better financial backing probably have an advantage. See, e.g., Stephanie Leonard Yarbrough, *The Jury Consultant—Friend or Foe of Justice*, 54 SMU L. REV. 1885, 1895–96 (2001) (discussing the advantage wealthy clients may have with regard to jury consulting services).

¹⁵ See generally Valerie P. Hans, *The Contested Role of the Civil Jury in Business Litigation*, 79 JUDICATURE 242 (1996).

¹⁶ Interestingly, the concern associated with juries appears to be uniquely American. See Graham C. Lilly, *The Decline of the American Jury*, 72 U. COLO. L. REV. 53, 58–59 (2001) (“Despite the costs and burdens of trial by jury, the American legal system strongly affirms the core value of lay participation in the adjudicative process and continues to hold tenaciously to the institution of jury trial. In this unyielding allegiance, the United States stands virtually alone. America is now the only country in the world where the jury continues to play both a broad and a central role in the adjudicatory process.”). See also VALARIE P. HANS & NEIL VIDMAR, *JUDGING THE JURY* 30 (1986).

¹⁷ See; HANS & VIDMAR, *supra* note 16 at 34–36; RANDOLPH N. JONAKAIT, *THE AMERICAN JURY SYSTEM* 18–23 (2003); Douglas G. Smith, *Structural and Functional Aspects of the Jury: Comparative Analysis and Proposals for Reform*, 48 ALA. L. REV. 441, 475–78 (1997).

¹⁸ Even in the most complex cases, a jury may decide important factual issues. For example, in the archaic and foreboding world of patent infringement actions, the Supreme Court has clearly determined that the ultimate question of infringement is a question of fact for the jury to decide. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 37–39 (1996).

¹⁹ See KASSIN & WRIGHTSMAN, *supra* note 12, at 21–22 (noting that a jury without bias is one of the most cherished ideals of our jury system).

²⁰ See, e.g., Jaime N. Morris, *The Anonymous Accused: Protecting Defendants' Rights in High-Profile Criminal Cases*, 44 B.C. L. REV. 901, 902–04 (2003). See also *Irvin v. Dowd*, 366 U.S. 717, 725–28 (1961).

party represented by a litigant, such as a large, wealthy corporation or insurance company.²¹ Of course, explicit bias—instances in which a juror is open and honest about a negative belief regarding one of the parties—is largely avoided through the use of *voir dire* and peremptory challenges (though unspoken or even unrealized biases surely continue to exist).²²

Another concern is the likelihood that jurors will put in less than the appropriate amount of effort in understanding and deciding a case, particularly when the facts are complex and the trial is lengthy.²³ The fact that jury service is generally compelled by law,²⁴ but compensated poorly,²⁵ certainly provides a breeding ground for such apathy. Add to that the modern notion that jury service is an unceremonious burden rather than a privilege,²⁶ and one can see why a juror may feel less than inspired to devote herself fully to the case at hand.

In a similar vein, many believe that juror incompetence may lead to improper or unfair verdicts.²⁷ This is especially so when a case concerns intricate issues, as in intellectual property infringement litigations, or abstract scientific facts, as often occurs in cases regarding medical malpractice torts.²⁸ It has been suggested that one reason for the existence of less than competent jury panels is that the pool of participants consists of only those who are incapable of thinking their way out of jury duty.²⁹ That cynical view is probably overstated, but many jurisdictions have nevertheless taken measures to ensure that citizens from all walks of life participate by limiting the scope of accepted reasons for being excused

²¹ See, e.g., Valerie P. Hans, *The Illusions and Realities of Jurors' Treatment of Corporate Defendants*, 48 DEPAUL L. REV. 327, 328–30 (1998); Charles Kauffman, *Jurors Carry Negative Presumptions*, NAT'L L.J., Jan. 19, 2004, at S1.

²² Cf. *Developments in the Law: The Civil Jury*, 110 HARV. L. REV. 1408, 1444–47 (1997). The right to a fair and impartial jury exists in both civil and criminal contexts. U.S. CONST. amend VI (“In all criminal prosecutions, the accused shall enjoy the right to a . . . trial, by an impartial jury”); *Thiel v. S. Pac. Co.*, 328 U.S. 217, 220 (1945) (“The American tradition of trial by jury, considered in connection with either criminal or civil proceedings, necessarily contemplates an impartial jury drawn from a cross-section of the community.”) (citing *Smith v. Texas*, 311 U.S. 128, 130 (1940)).

²³ See Joseph Sanders, *Scientifically Complex Cases, Trial by Jury, and the Erosion of Adversarial Processes*, 48 DEPAUL L. REV. 355, 361 (1998) (describing the barriers to jury comprehension in complex cases, including boredom, as noted by the 1989 report by the SPECIAL COMM. ABA. SEC. LITIG; JURY COMPREHENSION IN COMPLEX CASES).

²⁴ See Evan R. Seamone, *A Refreshing Jury Cola: Fulfilling the Duty to Compensate Jurors Adequately*, 5 N.Y.U. J. LEGIS. & PUB. POL'Y 289, 291–92 (2001).

²⁵ See generally NATIONAL CENTER FOR STATE COURTS, *Jury Management: Juror Pay in the States*, available at http://www.ncsconline.org/WC/Publications/KIS_JurManPayStates.pdf (noting most state pay scales are in the \$10–\$30 per day range). See also Seamone, *supra* note 24, at 295–97.

²⁶ See Lilly, *supra* note 16, at 61–62 (describing the incentives against serving on a jury and noting that they appear to be increasing in modern times).

²⁷ See generally Neil J. Vidmar, *Foreward: Empirical Research and the Issue of Jury Competence*, 52 LAW & CONTEMP. PROBS. 1 (1989).

²⁸ See, e.g., Dennis A. Estis & Shirleen A. Roberts, *Helping Juries Get a Grasp on Complex Issues*, N.J. L.J., Mar. 11, 1996, at Supp. 4 (“confidence in civil juries has dwindled as litigation has become more complex”).

²⁹ See Smith, *supra* note 17, at 505 (“The modern selection process is skewed in favor of selection from the less well-educated and experienced segment of society. Members of society who are better educated often escape jury duty. Furthermore, more educated members of society are sometimes excused from jury service for cause, and there is some evidence that lawyers may attempt in certain instances to utilize peremptory challenges to strike more educated jurors.”).

from jury duty.³⁰ Some would go further to address incompetence: it has been proposed that the empanelling of “expert juries” is the best way to handle very complex cases.³¹ That solution has its own problems,³² however, and has, in any case, not been widely adopted in practice.³³

Together, these very real barriers to completely fair and objective decisionmaking by American juries contribute to a general uncertainty about the process.³⁴ Even if one can reasonably intuit that at least one of the aforementioned biases or intellectual failings will impact the jury’s decision, it is extremely difficult to predict to what extent this will occur and whether any such effect will be outweighed by other factors (including other biases). In fact, it is not uncommon for litigants to view jury behavior as essentially random, or at least defying meaningful prediction.³⁵ A jury trial is often described as a significant risk or even a “roll of the dice”³⁶ because it is so difficult to pin down the aspects of the trial that will make the greatest impression on the jurors or bring forth any of the above-described juror failings.³⁷ This type of risk may be particularly unacceptable in the context of financially-significant cases, and the urge to avoid the risk—by early settlement on undesirable terms, if necessary—is great. The uncertainty pervades both civil and criminal law environments.³⁸

³⁰ For an indication as to the longstanding nature of such measures, see Don Brown, *Eliminating Exemptions From Jury Duty: What Impact Will it Have?*, 62 JUDICATURE 436, 439 (1979) (discussing the impact of revision of California’s jury selection rules, and noting that there is a trend toward broader jury lists). In a demonstration of how far such rules will go, consider a recent case in New Hampshire that actually found the Governor empanelled on a jury. See *Voir Dire*, NAT’L L.J., Feb. 16, 2004, at 3.

³¹ See, e.g., Michael A. Fisher, *Going for the Blue Ribbon: The Legality of Expert Juries in Patent Litigation*, 2 COLUM. SCI. & TECH. L. REV. 1, 10–14 (2001) (arguing in the context of patents, a special, technically qualified jury is a better option in certain cases, and is constitutional based on a “complexity exception” to the Seventh Amendment); Davin M. Stockwell, Comment, *A Jury of One’s (Technically Competent) Peers?*, 21 WHITTIER L. REV. 645, 648 (2000) (discussing the use of expert juries in the context of patent cases); Kristy Lee Bertelsen, Note, *From Specialized Courts to Specialized Juries: Calling For Professional Juries in Complex Civil Litigation*, 3 SUFFOLK J. TRIAL & APP. ADVOC. 1, 22–28 (1998) (indicating several factors that affect an average jury’s comprehension).

³² See, e.g., Fisher, *supra* note 31 at 15–18 (referring to the requirement that a jury represent a “fair cross section” of the community).

³³ See *id.* at 18–21. It has been noted that ADR techniques may more easily make use of such so-called “blue ribbon juries.” *Id.* at 49. See generally William V. Luneburg & Mark A. Nordenberg, *Specially Qualified Juries and Expert Nonjury Tribunals: Alternatives for Coping with the Complexities of Modern Civil Litigation*, 67 VA. L. REV. 887 (1981); Mark A. Nordenberg & William V. Luneburg, *Decisionmaking in Complex Federal Civil Cases: Two Alternatives to the Traditional Jury*, 65 JUDICATURE 420 (1982).

³⁴ See, e.g., Peter H. Schuck, *Judicial Avoidance of Juries in Mass Tort Litigation*, 48 DEPAUL L. REV. 479, 479–80 (1998) (noting that defendants wish to avoid jury trials primarily due to the uncertainty associated with them).

³⁵ See, e.g., *Former Smoker Awarded \$28 Billion in Jury Verdict*, HOUSTON CHRON., Oct. 5, 2002, at A2; Sharon Bernstein & Paul Jacobs, *Jury Awards \$23.3 Million in Fen-Phen Case*, L.A. TIMES, Aug. 7, 1999, at A1. A particularly humorous account of a hopelessly confused jury is presented by Reynolds Holding in *Behind the Scenes at the Law-Making Factory: What Should be a Neat, Clean Process Can Turn Ugly When Legal Decisions Are Made by Jury Trials*, S.F. CHRON., Aug. 8, 1998, at Z3.

³⁶ *Duncan v. Louisiana*, 391 U.S. 145, 157 (1968) (noting that there “have been express or implicit assertions that juries are incapable of adequately understanding evidence or determining issues of fact, and that they are unpredictable, quixotic, and little better than a roll of dice,” but ultimately disagreeing with the characterization).

³⁷ See, e.g., *Why Lawyers Gamble With Client Cash*, NAT’L L.J., Feb. 10, 1997, at C15 (“A jury trial is a significant gamble for both sides in a civil action. Plaintiffs’ attorneys and defense counsel alike have horror stories about sure things lost when juries come in with completely unexpected results.”).

³⁸ See, e.g., Smith, *supra* note 17, at 443–45.

If jury behavior could be reliably determined, there is at least a chance that the improper influence of bias, sloth, or ineptitude can be countered and much of the ill effect of unpredictability would dissipate. In other words, while a biased jury is obviously not ideal, if the litigants truly understood the impact of various biases they could craft case presentations in response to (or perhaps even confront jurors with) their prejudices. Greater predictability could restore confidence in the system lost to the perception of jury randomness and undue risk. Additionally, if the bias is proven to be significantly severe and pervasive, it may lead to reform that improves the process.³⁹ Therefore, research that penetrates and dissects jury deliberations is essential not only to present day litigants, but also to the very future of the petit jury in the American judicial system. Unfortunately, historical quirks combined with traditional experimental design flaws tend to preclude a useful understanding, effectuating a virtual cloak around the jury decisionmaking process (and making any method of penetrating this closed world highly valuable).

A. BUILDING THE BLACK BOX

Jury deliberations are often referred to as a “black box” of uncertain behavior because information goes into the jury room and a verdict eventually comes out. Exactly how the latter flows from the former is less than clear—almost as if it were processed in a mysterious, magical box.⁴⁰ There are two primary reasons for this phenomenon. One is simply the inherent complexity of human behavior. The second is the secret nature of jury deliberation. In concert, these factors work to prevent the possibility of a more complete understanding of juries through direct observation of actual cases.

The intricacies of human nature are accepted, if not well understood. We process information not simply on objective face value, but against a

³⁹ Note that reform focused on modifying the system rather than correcting the jurors themselves is advocated by the majority of legal and social science researchers and practitioners. See Phoebe C. Ellsworth, *Jury Reform at the End of the Century: Real Agreement, Real Changes*, 32 U. MICH. J.L. REFORM 213, 223–24 (1999) (“[D]eficiencies in the performance of jurors reflect deficiencies in the system, and that reform efforts should involve changes in the task presented to jurors rather than changes in the people chosen to serve.”).

⁴⁰ See, e.g., Kimberly A. Moore, *Judges, Juries, and Patent Cases—An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 368 (2000) (“The ‘black box’ nature of jury verdicts leaves the Federal Circuit unable to correct inaccuracy or bias on the part of jurors.”); Vivian Berger, *Black Box Decisions on Life or Death—If They’re Arbitrary, Don’t Blame the Jury: A Reply to Judge Patrick Higginbotham*, 41 CASE W. RES. L. REV. 1067, 1068 (1991) (analyzing Higginbotham’s work on jury decision-making and noting “Judge Higginbotham’s ambivalence about the institution of jury sentencing in capital cases appears to flow not from distrust of the competency of lay people but rather from the notion that juries operate by ‘gut-level hunch,’ rendering determinations that are as impenetrable as a black box.”); Clay S. Conrad, *Scapegoating the Jury*, 7 CORNELL J.L. & PUB. POL’Y 7, 7 (1997) (“The jury has been likened to a ‘black box’ where private citizens carefully and conscientiously consider the facts of a case and see that justice is done.”); Robert J. MacCoun, *Getting Inside the Black Box: Toward a Better Understanding of Civil Jury Behavior*, THE RAND INSTITUTE FOR CIVIL JUSTICE at 5 (1987) (“Jury secrecy legislation puts researchers in a bind, for it places the behavior of juries inside a ‘black box.’ We can observe what goes into the box (the events at trial), and we can observe what comes out of the box (jury verdicts), but we don’t really know what’s going on inside the box.”).

deep background of past experiences and learned biases.⁴¹ This background can be derived from sources as recent as a media report on the same or related issues, or more obscurely, from lessons learned in childhood or as a young adult.⁴² The complexity of human behavior is obviously an obstacle to understanding a great number (if not all) of group decisionmaking processes, and it is fair to say that the situation in which the average juror is placed is not so unusual in this regard. That juries are subject to psychological failings is not surprising, nor necessarily wrong as a matter of equitable administration of justice.⁴³

On the other hand, the closed nature of jury deliberation prevents effective study of how human nature affects the process. Most jurisdictions have rules that prevent intrusion into the jury room.⁴⁴ Interestingly, secret jury deliberations are not so much a cornerstone of our English-derived common law system as they are the somewhat recent consequence of an attempt to understand jury behavior gone awry (at least from a public relations perspective). In the 1950s, researchers from the University of Chicago undertook the first large-scale, systematic study of juries using methods developed in the social sciences.⁴⁵ The series of studies, known as the Chicago Jury Project, undertook a variety of methods to look at the way juries behave in the courtroom. One of the most intriguing aspects of the study involved recording the deliberations of jurors during actual trials.⁴⁶ The information yielded some of the most reliable jury research that has ever been obtained.⁴⁷ Unfortunately, when it became widely known that jurors were being recorded without their knowledge, a public outcry ensued.⁴⁸ The federal government and most state jurisdictions immediately adopted legislation to prevent access to the jury room.⁴⁹

⁴¹ See, e.g., KASSIN & WRIGHTSMAN, *supra* note 12, at 27–28 (describing the various psychological forces, influenced by environment, that may impact a juror’s decisionmaking).

⁴² See *id.* See also Christina A. Studebaker & Steven D. Penrod, *Pretrial Publicity: The Media, the Law, and Common Sense*, 3 PSYCHOL. PUB. POL. & L. 428, 429 (1997) (“The potentially prejudicial influence of pretrial publicity on juror decision making causes tension between the First and Sixth Amendments of the U.S. Constitution. Specifically, although some feel that no limitations should be put on the rights of a free press, prejudicial information released by the press could interfere with a defendant’s right to a fair trial. Although the free press versus fair trial debate is far from settled, it is clear that the courts and some policymaking groups are aware of the potential problems posed by prejudicial pretrial publicity.”).

⁴³ See, e.g., NORMAN J. FINKEL, COMMONSENSE JUSTICE 19 (1995) (describing the basis behind heeding the “community sentiment” encompassed in jury opinions, which is comprised of everything impacting individual opinions).

⁴⁴ See HANS & VIDMAR, *supra* note 16, at 99.

⁴⁵ See Dennis J. Devine, Laura D. Clayton, Benjamin B. Dunford, Rasmy Seying, & Jennifer Pryce, *Jury Decision Making: 45 Years of Empirical Research on Deliberating Groups*, 7 PSYCHOL. PUB. POL’Y & L., 622, 622–23 (2001). Other isolated studies were conducted prior to the Chicago research, but did not produce wide-reaching results. *Id.*

⁴⁶ See *id.* at 623; HANS & VIDMAR, *supra* note 16, at 99.

⁴⁷ See Devine et al., *supra* note 45, at 623; HANS & VIDMAR, *supra* note 16, at 99; KASSIN & WRIGHTSMAN, *supra* note 12, at 14.

⁴⁸ See KASSIN & WRIGHTSMAN, *supra* note 12, at 13–14. Eventually legislation was enacted to prevent any such study from taking place in the future. *Id.* at 14.

⁴⁹ HANS & VIDMAR, *supra* note 16, at 99; HARRY KALVEN & HANS ZEISEL, *THE AMERICAN JURY* vi–vii (1966).

The laws inspired by the Chicago Jury Project uproar are still largely in force today,⁵⁰ though there have been some incidental exceptions.⁵¹ Until very recently, studies of the deliberations of actual jurors have been completely off limits to most researchers and participants in the legal system alike. Perhaps fueled by a notion that the Chicago Jury Project-inspired legislation was a bit short-sighted, a few limited studies using real jurors have been conducted under the supervision of selected court systems.⁵² The results are intriguing and undoubtedly will contribute much to the existing body of jury research.⁵³ However, the limited nature of the work suggests that they will not yield a complete understanding of juries in the near future, if ever.⁵⁴

There are, of course, other methods to obtain information from actual jurors aside from spying on jury deliberations. *Voir dire*—the process of juror questioning to select a final panel—allows a limited peek into the minds of prospective jurors.⁵⁵ Indeed, peremptory challenges based on *voir dire* answers is the primary weapon used by litigants to avoid outright prejudice and bias.⁵⁶ However, its effectiveness is arguable even in this regard,⁵⁷ and it certainly provides a less than clear picture as to the broader personal history and biases of any particular juror. Similarly, jury consulting firms may collect demographic information on the likely composition of a particular jury pool.⁵⁸ To the extent that some jury inclinations can be predicted based on broad characteristics, such information is useful, but the picture is far from complete. Unfortunately, it is possible that the situation will grow even less clear in the future, as there is evidence that jurors are uncomfortable with even the limited level of information that is currently available,⁵⁹ supporting legislation or rules to add further protections.⁶⁰

⁵⁰ See 18 U.S.C. § 1508 (2000); Marilyn C. Ford, *The Role of Extralegal Factors in Jury Verdicts*, 11 JUST. SYS. J. 16, 33 (1986) (nearly all states prohibit observation of jury deliberations).

⁵¹ See, e.g., Irwin A. Horowitz, Norbert L. Kerr, & Keith E. Niedermeier, *Jury Nullification: Legal and Psychological Perspectives*, 66 BROOK. L. REV. 1207, 1221 (2001) (describing a broadcast of the PBS television program, *Frontline*, that broadcast a jury deliberation which was recorded with the consent of the jurors); William R. Bagley, Jr., Note, *Jury Room Secrecy: Has the Time Come to Unlock the Door?*, 32 SUFFOLK U. L. REV. 481, 486–88 (1999) (describing a CBS broadcast of videotaped jury deliberations).

⁵² See Bowers, *supra* note 8, at 1077; Hans et al., *supra* note 8, at 365–66.

⁵³ See, e.g., Devine et al., *supra* note 45, at 623–24.

⁵⁴ For example, the Capital Jury Project only concerns criminal cases (more specifically, capital murder cases). See Bowers, *supra* note 8, at 1077. While the Arizona Jury Project concerns civil trials, and is a more controlled and invasive study, it concerns only the impact of juror discussion during trial. See Hans et al., *supra* note 8, at 365–66.

⁵⁵ The amount of time allowed for *voir dire* differs depending on the judge and the type of case. See HANS & VIDMAR, *supra* note 16, at 67.

⁵⁶ See Patterson & Neuffer, *supra* note 14, at 97–98; HANS & VIDMAR, *supra* note 16, at 67.

⁵⁷ See Reid Hastie, *Is Attorney-Conducted Voir Dire an Effective Procedure for the Selection of Impartial Juries?*, 40 AM. U. L. REV. 703, 710–17 (1991) (survey of research indicating that various *voir dire* techniques are not that effective).

⁵⁸ See DecisionQuest, *Trial Consulting and Jury Research*, available at <http://www.decisionquest.com/site/trial.htm> (last visited March 25, 2004) (noting that such information is commonly collected, but may not be the best indicator of jurors' predispositions).

⁵⁹ See, e.g., Nancy J. King, *Nameless Justice: The Case for the Routine Use of Anonymous Juries in Criminal Trials*, 49 VAND. L. REV. 123, 129–130 (1996) (“More and more prospective jurors appear to be arriving at the courthouse (if they come at all) dreading the prospect that personal and family

Thus, actual jury decisionmaking remains an obscure process. As explained below, attempts to circumvent the cloak and gather data using second-best methods dominate jury research. For the time being, questions resulting from the incomplete picture loom over litigants.

B. THE EFFECT OF UNPREDICTABILITY

The consternation regarding juries can have real effects on the administration of justice in the United States, though they may not be readily apparent. Subtle changes in the litigation behavior of parties over the years demonstrate that a new legal regime is emerging: one that bypasses trials whenever possible. Although it is not entirely clear that the unpredictability of juries is at the root of all of the related changes, it is reasonable to assume that it is a major contributing factor, and a resolution of these issues would reverse some of the trend.⁶¹

America is regarded as one of the most litigious societies on the planet;⁶² it is no surprise, therefore, that the number of litigations filed has risen over the past decade in both state⁶³ and federal⁶⁴ courts. It is somewhat shocking, then, that the number of jury trials has fallen. The most dramatic statistics are from the federal courts. According to the Office of Administration of U.S. Courts, the number of completed civil jury trials has steadily fallen from 5,422 in 1988 to 2,650 in 2002.⁶⁵ The same trend is apparent for criminal trials.⁶⁶ At the same time, the total number of filed cases has risen from 287,649 to 345,483.⁶⁷ The picture is a little murkier on the state level. Statistics gathered by the U.S. Department of Justice shows a decline in jury trials from just over 12,000 in 1992 to just over 10,000 in 1996 across a wide range of civil litigations.⁶⁸ However, the

information, and even the statements that they make during deliberations, could become the focus of public comment.”).

⁶⁰ See Paula L. Hannaford, *Making the Case for Juror Privacy: A New Framework for Court Policies and Procedures*, NAT'L CTR. FOR ST. CTS. (2001), available at http://www.ncsconline.org/WC/Publications/Res_Juries_JurorPrivacyWhitePaperPub.pdf.

⁶¹ Whether reversing the trend is an essential goal is arguable. Some have noted with dismay that the marginalization of the jury represents a fundamental change in the structure of our court system, moving away from some of its original effectiveness. See, e.g., Lilly, *supra* note 16, at 59–60. Alternatively, it could be argued that trial represents the ultimate failure of settling the dispute through reasonable means, so any reduction in trial rates is actually better overall. See *Recent Developments in Alternative Forms of Dispute Resolutions (ADR)*, 100 F.R.D. 512, 514 (1983) (statements made by Eric D. Green) (“In virtually all cases, the solution that two parties can work out themselves, voluntarily, will be better than the solution that the most Solomonian court could come up with, as the court is limited in the remedies that it can prescribe.”).

⁶² See Linda S. Mullenix, *Discovery in Disarray: The Pervasive Myth of Pervasive Discovery Abuse and the Consequences for Unfounded Rulemaking*, 46 STAN. L. REV. 1393, 1399 (1994). However, how much of that perception is anecdotal myth and, even if true, whether that in and of itself is a bad thing, is open to question.

⁶³ See NAT'L CTR. FOR ST. CTS., *Court Statistics Project*, (2002) available at http://www.ncsconline.org/D_Research/csp/2000_Total_Caseloads (showing a rise in civil trials filed from 14,591,080 in 1993 to 16,335,207 in 2002).

⁶⁴ See ADMIN. OFF. OF THE U.S. CTS., *Judicial Facts and Figures*, tbl. 4 (Feb. 2003) (civil and criminal cases completed), available at <http://www.uscourts.gov/judicialfactsfigures/contents.html>.

⁶⁵ *Id.* at tbl. 4.3.

⁶⁶ *Id.*

⁶⁷ *Id.* at tbl. 4.1.

⁶⁸ See generally Carol J. DeFrances, Steven K. Smith, Patrick A. Langan, Brian J. Ostrom, David B. Rottman, & John A. Goerd, *Civil Jury Cases and Verdicts in Large Counties*, in BUREAU OF JUST.

change over this five-year period may not be significant enough to conclude that an actual decline in jury use is taking place.⁶⁹ There are also indications that the number of trials in general (both jury and bench) is declining and more cases are being resolved at earlier stages.⁷⁰

Two distinct litigation routes may be absorbing the lion's share of cases that would have otherwise resulted in a jury trial: settlement (including alternate dispute resolution) and summary judgment. Settlement has, of course, always been an alternative to pursuing a case to formal conclusion. Whether parties see settlement as an option clearly depends on how they view their litigation positions, but it also depends on the amount of risk they attribute to the alternative of a trial.⁷¹ Increasing that risk would logically create incentives to choose settlement if possible. Therefore, it is not surprising that settlement rates have significantly outstripped the percentage of cases ending in trial over the years.⁷² Summary judgment is the opposite side of the same coin. If successful in convincing a judge that triable issues of fact do not exist, a litigant may be able to circumvent the jury while avoiding giving any ground to an adversary through settlement. Indeed, the rate of summary judgment has also been on the rise in recent years.⁷³

Indications that parties are attempting to end their cases before facing a jury are informative, but somewhat unsatisfying in providing the full picture. For example, it is reasonable to ask, why not structure the litigation to avoid juries altogether if juries are truly such a concern? Even if one desires the certainty of a trial by a formal decisionmaker and summary judgment is not possible, alternatives in the form of "bench trials" exist in the United States. In the context of federal cases, it is possible to try every issue of fact before a judge in a bench trial.⁷⁴ Similarly, bench trials are an option for deciding factual aspects in many state court actions

STAT., SPECIAL REP. (July 1995) (containing data from 1992); Carol J. DeFrances & Marika F. X. Litras, *Civil Jury Cases and Verdicts in Large Counties, 1996*, in BUREAU OF JUST. STAT. BULL. (Sept. 1999) (containing data from 1996). Both reports are available at <http://www.ojp.usdoj.gov/bjs/abstract/ctcvlc96.htm>.

⁶⁹ According to the authors of the 1999 study containing 1996 data, the decline in the number of jury trials is not statistically significant. DeFrances & Litras, *supra* note 68, at 16. Recent data from the National Center for State Courts shows that, for ten states able to provide comparable data, jury trials are indeed on the decline, dropping from 26% of trials in 1993 to 23% in 2002. See NAT'L CTR. FOR ST. CTS., *Examining the Work of State Courts* 13–16 (2003), available at http://www.ncsconline.org/D_Research/csp/2003_Files/2003_Overview.pdf.

⁷⁰ See ADMIN. OFF. OF THE U.S. CTS., *supra* note 64, at tbl. 4.3 (showing that the number of all types of federal trials has decreased since 1988).

⁷¹ See Bruce L. Hay, *Effort, Information, Settlement, Trial*, 24 J. LEGAL STUD. 29, 30–34 (1995) (discussing the factors that encourage or prevent settlement and developing a model to explain the behavior).

⁷² See, e.g., Francis E. McGovern, *Toward a Functional Approach for Managing Complex Litigation*, 53 U. CHI. L. REV. 440, 447–48 (1986) (noting that settlement is by far the most preferred end to a case, and that roughly 80% of filed cases settle).

⁷³ See Arthur R. Miller, *The Pretrial Rush to Judgment: Are the "Litigation Explosion," "Liability Crisis," and Efficiency Clichés Eroding Our Day in Court and Jury Trial Commitments?*, 78 N.Y.U. L. REV. 982, 1048–57 (2003) ("Thus, even though the use of summary judgment to dispose of cases may not have increased in all legal fields, it undoubtedly has increased in many and in the aggregate. Clearly, Rule 56 has evolved from a 'toothless tiger' into a powerful tool for judges to control dockets and respond to the supposed 'litigation explosion.'").

⁷⁴ See FED. R. CIV. P. 39(b).

as well.⁷⁵ Arguably, bench trials provide the advantage of a final resolution without compromise on the part of the litigants, but do not draw in the disadvantages of using unpredictable average citizens untrained in the law.⁷⁶ If the jury itself is the primary concern, one would expect to see a mass exodus of cases to the bench trial format. Yet, such a move is not evident in recent court statistics. In fact, according to federal statistics, the number of bench trials has actually decreased in approximately the same proportion as jury trials.⁷⁷ Certainly, this suggests that there are additional forces that dissuade parties from choosing trials in general,⁷⁸ but leaves the question of jury trials, specifically, somewhat clouded.

Perhaps the confounding trial figures are not so surprising. In truth, determining the desirability of jury trials is not as simple as comparing statistics for each method of resolution. This is because the question of whether a case heads for a jury or bench trial is not necessarily answered by litigant consensus. Rather, if only one party requests a jury trial, and the right exists for that particular action, a jury usually must be provided.⁷⁹ Thus, if only one party perceives a slight advantage to having the case heard before a jury, the case can be so directed. This may be so even if both parties are concerned about a jury's ability to fairly and predictably decide the issues; the litigation strategy of one party can force the case to a jury.⁸⁰

An additional factor that may skew the statistics is the possibility that negative consequences may accompany settlement, dissuading parties who would otherwise be inclined to settle due to their fear of a jury trial. One of the most important of these consequences is the potential that any reasonable settlement may lead to antitrust scrutiny. A prominent and recent example is provided by the high-stakes world of pharmaceutical litigation, wherein branded drug companies and generic manufacturers

⁷⁵ See Susan C. Towne, *The Historical Origins of Bench Trial for Serious Crime*, 26 AM. J. LEGAL HIST. 123, 145 (1982) (noting that there is divergent development of the use of bench trials in state court, and that only in the nineteenth century were they eventually allowed for serious crimes in some states).

⁷⁶ It is certainly arguable as to whether a judge is less likely to be subject to bias and confusion, but most assume that formal training in the law provides some advantage. See Hans & Albertson, *supra* note 7, at 1509–10 (using judge-jury agreement as a measure of jury verdict soundness). For some types of litigation, it is possible that characteristics possessed by some jurors, such as technical training, may be more advantageous than a judge's legal training. See Moore, *supra* note 40, at 373–74 (noting that judges may not be better at resolving patent cases, in part, because they may have less relevant technical training than many jurors).

⁷⁷ See ADMIN. OFF. OF THE U.S. CTS., *supra* note 64, at tbl. 4.3 (stating that civil bench trials decreased from 6,966 in 1988 to 3,365 in 2002 and criminal bench trials stayed relatively even with 3,371 in 1988 and 3,570 in 2002).

⁷⁸ For example, a perceived difference in speed may supercede objective fairness or predictability. See generally Theodore Eisenberg & Kevin M. Clermont, *Trial by Jury or Judge: Which is Speedier?*, 79 JUDICATURE 176 (1996).

⁷⁹ The right to a jury trial in criminal cases is provided by the Sixth Amendment, and it applies to states via the due process clause of the Fourteenth Amendment. See U.S. CONST. amend VI, XIV; *Duncan v. Louisiana*, 391 U.S. 145, 149 (1968). In federal civil cases, the right to a jury is outlined by the Seventh Amendment. See U.S. CONST. amend. VII. Although the Seventh Amendment does not apply to states, see *Gasparini v. Ctr. for Humanities, Inc.*, 518 U.S. 415, 432, n.14 (1996) (citing *Walker v. Sauvinet*, 92 U.S. 90, 92 (1876) (“The Seventh Amendment . . . governs proceedings in federal court, but not in state court . . . ”)), most state constitutions provide the right for certain types of civil actions. See Jean R. Sternlight, *The Rise and Spread of Mandatory Arbitration as a Substitute for the Jury Trial*, 38 U.S.F. L. Rev. 17, 24 (2003) (“Most state constitutions protect the right to jury trial for certain civil claims.”).

⁸⁰ See Lilly, *supra* note 16, at 56–57.

battle over the validity and enforceability of patents on important drugs.⁸¹ The intellectual property involved in these industries is frequently the subject of protracted and expensive litigation.⁸² Cutting the litigation short, however, means finding a mutually acceptable solution; for the branded pharmaceutical company, very little substitutes for complete market exclusivity.⁸³ Because settlements between two companies that include an agreement that one will stay off of the market are inherently in danger of being deemed anticompetitive, many companies will avoid them, particularly in view of recent cases pursued by the Department of Justice and the Federal Trade Commission.⁸⁴ Confirming this aberration in the overall trend, recent research suggests that an *increasing* percentage of such intellectual property disputes will be tried before juries.⁸⁵

Even if the statistical measures cannot provide a perfectly clear view, anecdotal evidence adds weight to the proposition that concern over juries affects their use in the American justice system. A recent survey of business lawyers and business executives indicates a reticence to take their disputes to juries.⁸⁶ According to the survey, "Several executives explained their views that businesses should and do try to avoid jury trials because issues are too complex for jurors to handle."⁸⁷ Additionally, the responses demonstrated a perception of general but indeterminate bias against business.⁸⁸

It is reasonable to conclude that reducing jury unpredictability is likely to enhance confidence in the system and may increase the jury use statistics as well. Moreover, unpredictability must be addressed with accurate evidence of biases, lest jury reform be undertaken in response to a problem that does not exist.⁸⁹ In view of what is at stake, it is unsurprising that efforts to understand jury behavior (that will not violate laws against jury deliberation intrusion) have been underway for many years. Progress has been made in research to date, but more must be done.

⁸¹ See *Andrx Pharm., Inc. v. Biovail Corp.*, 276 F.3d 1368, 1370–72 (Fed. Cir. 2002) for a discussion of the law underlying these types of disputes.

⁸² See, e.g., Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1502 (2001) (discussing the extreme expense of patent litigation and relating information from a survey conducted by the American Intellectual Property Law Association finding the average cost through trial to be \$1.5 million).

⁸³ See Herbert Hovenkamp, Mark Janis & Mark A. Lemley, *The Interface Between Intellectual Property Law and Antitrust Law*, 87 MINN. L. REV. 1719, 1722 (2003) (discussing the problem of settling patent cases, generally).

⁸⁴ See FEDERAL TRADE COMM'N, *GENERIC DRUG ENTRY PRIOR TO PATENT EXPIRATION: AN FTC STUDY*, vii–viii (July 2002).

⁸⁵ See Moore, *supra* note 40, at 366 (finding that the percentage of patent cases tried to juries increased from 2.8% in 1968–70 to 59% in 1997–99).

⁸⁶ See John Lande, *Failing Faith in Litigation? A Survey of Business Lawyers' and Executives' Opinions*, 3 HARV. NEGOT. L. REV. 1, 32–35 (1998).

⁸⁷ *Id.* at 34.

⁸⁸ *Id.* at 34–35 ("About three-quarters of the executives (75%) and inside counsel (73%) believed that juries judge businesses more harshly than juries judge individuals.")

⁸⁹ See JONAKAIT, *supra* note 17, at 279 ("Mistaken impression of juries, however, often drive reform efforts, obscuring important areas of reform.")

III. TRADITIONAL EFFORTS TO UNDERSTAND JURIES: A VARIETY OF APPROACHES LEAVING SUBSTANTIAL GAPS

Interestingly, much of the rich field of jury research that has developed is conducted out of the public eye by private jury research companies, typically employed by a party actually involved in a specific litigation.⁹⁰ Additionally, jury studies have been conducted within the more public forum of college and university research. Law professors and political scientists have produced significant retrospective studies of existing decisions, and scientists working in the field of psychology produce much forward-looking experimental research. However, despite the volume of information, there is still a great deal of ambiguity concerning juries; this ambiguity may be inherent in the types of studies to date. Most jury research employs one of essentially two basic information sources of jury decision-making: (1) indirect information gathered from either archival analysis of prior cases or from using shadow juries and/or post-trial jury interviews in current cases, and (2) direct information derived from controlled studies using individuals participating in a hypothetical situation—*i.e.*, “mock juries.”⁹¹ Each, as traditionally conducted, has its advantages and disadvantages; no method is perfect or complete.

A. INDIRECT MEASURES OF JURY DECISIONMAKING SUFFER FROM INCOMPLETE INFORMATION AND THE INABILITY TO TEST ISOLATED INFLUENCES

The primary benefit of using the results of actual cases as the dataset is that there is no question that accurate jury behavior is reflected. One can review particular litigation choices under certain jury conditions, correlating them to the outcome.⁹² However, as noted above, the law creates a black hole for data regarding the jury deliberations themselves. One must infer information regarding what factors the jury deemed important or how they may have been unduly influenced by a particular trial element.⁹³ Additionally, there is no ability to change a variable and retest under the same conditions.⁹⁴ Two cases may be similar, but with entirely different jurors and at least slightly different facts, a determination about whether a fact or issue was the reason for a difference in the result is at some level conjecture. Although the available methodologies suffer from these infirmities to different extents, all can provide important information. These studies could be carried out by private companies at the

⁹⁰ Several companies conduct jury research of this type. One of the largest is Bowne DecisionQuest, which offers, *inter alia*, jury simulations and jury profiling. See *Case Strategy Development*, Bowne DecisionQuest, at <http://www.decisionquest.com/site/trial.htm> (last updated Aug. 25, 2000).

⁹¹ See Saks, *supra* note 7, at 3–5; KASSIN & WRIGHTSMAN, *supra* note 12, at 14–19.

⁹² See Saks, *supra* note 7, at 3 (“[The correlational approach] has the advantage of looking at natural, “real world,” behavior, but the data are confounded and therefore subject to alternative interpretations.”).

⁹³ See MacCoun, *supra* note 40, at 8 (“This is an inherent drawback of the archival approach—archival sources of data rarely include measures of all of the variables in which the analyst might be interested.”).

⁹⁴ See Saks, *supra* note 7, at 6 tbl. 1 (delineating the experimental constraints of various research methods).

behest of one of the parties involved (or soon to be involved) in a particular litigation, but because a given study is less useful to actual litigants due to the necessarily broad data that is produced,⁹⁵ this work is more likely to be conducted in academia.

Perhaps the most utilized method of indirect jury analysis is the parsing of publicly available information on trial outcomes to find trends. This archival analysis uses statistical information compiled by courts or private parties to determine the answers to such questions as whether punitive damages are commonly awarded in civil cases,⁹⁶ or whether jury decisions in patent cases are more likely than not to be reversed by judgment as a matter of law.⁹⁷ This method is useful for tracking historical changes in the behavior of juries, but often relies on data insufficient for all but relatively general conclusions.⁹⁸ Multi-factored databases that could help identify the impact of a variety of variables are difficult to construct, primarily because the various court systems track different types of information.⁹⁹ Additionally, one must speculate as to the pre-trial decisions that may have influenced whether a jury trial appears in the database at all.¹⁰⁰

The use of post-trial interviews is a method that allows for a more specific and controlled, but still indirect, look into the jury deliberation process. Jurors are questioned either in person or by survey after making a decision in the case.¹⁰¹ While useful in culling the exact information in which researchers are interested, there is a prominent accuracy issue. Specifically, there is always the danger that a juror will not respond honestly to post-decision questions, but instead attempt to color or revise the thinking that impacted their decision in order to avoid being perceived as foolish, uninformed, or biased.¹⁰² And, of course, the research is necessarily limited to the set of facts presented to the group of jurors surveyed; thus, correlations between different juror groups may not be strong.¹⁰³

⁹⁵ See KASSIN & WRIGHTSMAN, *supra* note 12, at 14–19 (providing a general description of various types of studies and the data they yield).

⁹⁶ See DeFrances & Litras, *supra* note 68, at 9 tbl. 8.

⁹⁷ Moore, *supra* note 40, at 396.

⁹⁸ *Id.* at 381.

⁹⁹ See *Jurisdiction and State Court Reporting Practices*, in NAT'L CTR. FOR ST. CTS., STATE COURT CASELOAD STATISTICS 61–97 (2002). However, the National Center for State Courts is making strides in standardizing state court reporting of relevant statistics. See *The New State Court Guide to Statistical Reporting*, CASELOAD HIGHLIGHTS, Nov. 2003, at 1, http://www.ncsconline.org/D_Research/csp/Highlights/Vol9No2.pdf.

¹⁰⁰ For example, if one wished to determine whether plaintiffs were more likely to win a particular type of litigation, one would have to take into account more than just the percentage of cases won at trial by plaintiffs. This is because those cases represent only a selection of the total cases filed—specifically, those cases wherein the parties substantially disagree on their chances of winning. See George L. Priest & Benjamin Klein, *The Section of Disputes for Litigation*, 13 J. LEGAL STUD. 1, 4 (1984) (describing the aforementioned phenomenon).

¹⁰¹ KASSIN & WRIGHTSMAN, *supra* note 12, at 15–16.

¹⁰² See Saks, *supra* note 7, at 6; J. Whisenand, *Florida's Experiment*, 64 A.B.A. J. 1860 (1978); KASSIN & WRIGHTSMAN, *supra* note 12, at 16 (“[T]his method rests entirely on people’s ability and willingness to disclose truthful information.”).

¹⁰³ See JONAKAIT, *supra* note 17, at 219 (Jury interviews and memoirs may yield useful information, “but we must be careful about using that information to make generalizations about the larger jury system.”).

In an attempt to circumvent the shortcomings of the above-described methods, some researchers make use of so-called “shadow juries.” Shadow juries consist of subjects who take part in a real case alongside the actual jurors.¹⁰⁴ They see the same evidence, hear the same witnesses, and are given the same instructions as the actual jury charged with deciding the fate of the litigants.¹⁰⁵ Importantly, laws preventing intrusion on the jury deliberation process will not apply to the shadow jury; they may be observed, videotaped, and even questioned while making their decision.¹⁰⁶ In that sense, the use of shadow juries has much in common with the use of “mock” juries described below, but without the problems of realism and context.¹⁰⁷ Unfortunately, experiments using shadow juries suffer from a profound lack of control over the process.¹⁰⁸ The deliberation must obviously follow the events of the actual trial, and no opportunity exists to introduce different or additional issues and facts.¹⁰⁹ Thus, shadow jury experiments cannot be precisely replicated or conducted with modified test factors.¹¹⁰ Additionally, not all courts will necessarily be sympathetic to allowing non-jurors such access to an ongoing litigation, particularly when sensitive facts may be involved.

B. DIRECT MEASURES OF “MOCK” JURY BEHAVIOR ARE COMPLETE AND VERSATILE, BUT INHERENTLY UNREALISTIC

To fill in the insufficiencies of indirect information gathering on jury behavior, many researchers favor a method that allows for direct observation in a controlled, replicable system. In an ideal world, a field experiment would be conducted in almost every case.¹¹¹ This method employs multiple groups of real jurors in a controlled setting where the effects of a particular variable can be studied.¹¹² It is useful even if the study is subject to the aforementioned laws preventing access to jury deliberations¹¹³ because the effect on the outcome may still be observed.¹¹⁴ However, difficult legal and ethical questions are raised by the prospect of varying trial procedures for some parties but not others simply to test a theory, so the use of field experiments has remained the rare exception

¹⁰⁴ See H. Zeisel & S. Diamond, *The Effect of Peremptory Challenges on Jury and Verdict: An Experiment in a Federal District Court*, 30 STAN. L. REV. 491, 492 (1978).

¹⁰⁵ See *id.* at 499–500.

¹⁰⁶ See KASSIN & WRIGHTSMAN, *supra* note 12, at 19.

¹⁰⁷ See *id.* However, as is the case with mock juries, shadow juries do suffer from the fact that their decision is not “real.” See MacCoun, *supra* note 40, at 10 (“They also allow researchers to examine how other juries might try the same case, but one drawback is that the shadow jurors—unlike actual jurors—are aware that their judgments have no legal consequences.”).

¹⁰⁸ See MacCoun, *supra* note 40, at 10.

¹⁰⁹ See KASSIN & WRIGHTSMAN, *supra* note 12, at 19.

¹¹⁰ *Id.*

¹¹¹ See, e.g., Devine et al., *supra* note 45, at 699 (“Perhaps the single strongest design is that which combines the best features of the laboratory and the field: the field experiment.”).

¹¹² See, e.g., MacCoun, *supra* note 40, at 10 (describing field experiments and explaining “In the experimental approach, a variable of interest is systematically varied while holding all other variables constant in order to identify its effects.”).

¹¹³ See *supra* notes 48–49 and accompanying text.

¹¹⁴ The Arizona Jury Project is a type of field experiment. See Hans et al., *supra* note 8, at 355–56.

rather than the rule.¹¹⁵ Thus, researchers are generally left with the second-best method of using so-called “mock juries.”

The mock jury approach entails the use of study participants as jurors in a hypothetical scenario that mimics many of the elements of an actual court proceeding.¹¹⁶ The underlying theory is that study participants will react similarly to a real jury if given the same choices in a comparable context.¹¹⁷ Through the use of these experiments, researchers gather information on the influence of specific biases or litigation techniques on the mock jury’s deliberations.¹¹⁸ As with field experiments, the main advantage of using mock juries over the indirect-data experiments is that a more scientific approach can be undertaken; every element of the mock trial may be modified to test its effect and the actual decisionmaking process can be observed.¹¹⁹ One can separate and analyze, element by element, the factors that contribute to jury verdicts. For this reason, it is the predominant research method.¹²⁰

A great deal of mock jury research is conducted in the United States, and in both private and academic settings. In the private context, trial consulting companies run mock trial simulations in order to determine the effect of facts or issues particular to a client’s case.¹²¹ However, because the cost of such private research is quite high,¹²² and the results are rarely shared with the public or even the company’s other clients, these studies do not contribute a great deal to the collective understanding of juries.¹²³ Additionally, alternate dispute resolution (“ADR”) techniques, often used in complex cases, may employ a surrogate jury to provide information on the relative strength of each party’s case in order to motivate settlement.¹²⁴ But these case-by-case procedures do not lend themselves to repetitive experimental study and, as with private jury consultant research, the results

¹¹⁵ See MacCoun, *supra* note 40, at 11 (“Despite their great potential, field experiments involving jury trials have rarely been conducted in the past, because of the difficult ethical and legal questions they raise.”); Devine, et al., *supra* note 45, at 699 (“Unfortunately, it is rarely possible to conduct field experiments with actual juries.”).

¹¹⁶ See Saks, *supra* note 7, at 4; MacCoun, *supra* note 40, at 12–14; Devine et al., *supra* note 45, at 626.

¹¹⁷ See KASSIN & WRIGHTSMAN, *supra* note 12, at 17.

¹¹⁸ See Hans & Albertson, *supra* note 7, at 1506.

¹¹⁹ See KASSIN & WRIGHTSMAN, *supra* note 12, at 19.

¹²⁰ See Hans & Albertson, *supra* note 7, at 1502 (“The most frequent method that jury researchers employ is the mock jury experiment.”); Saks, *supra* note 7, at 5–8.

¹²¹ See Franklin Strier & Donna Shestowsky, *Profiling the Profilers: A Study of the Trial Consulting Profession, Its Impact on Trial Justice, and What, If Anything We Can do About It*, 1999 WIS. L. REV. 441, 456 (1999) (“Consultants report spending the greatest percentage of their consulting time on mock trial simulations, followed by case theory/presentation and focus groups, respectively.”); Stephanie Leonard Yarbrough, *The Jury Consultant—Friend or Foe of Justice*, 54 SMU L. REV. 1885, 1893–94 (2001) (noting that “Mock trials are one of the most popular instruments used by jury consultants.”).

¹²² See Hon. Paul R. Michel, *A View From The Bench: Achieving Efficiency and Consistency*, 19 TEMP. ENVTL. L. & TECH. J. 41, 46 (2000) (comment from a Federal Circuit Judge noting that trial preparation including mock juries is “very, very expensive” and indicative of a system in need of reform).

¹²³ See Strier & Shestowski, *supra* note 121, at 474 (noting that consulting services are only available to the wealthy).

¹²⁴ Harry T. Edwards, *Alternate Dispute Resolution: Panacea or Anathema?*, 99 HARV. L. REV. 668, 673, n.16 (1986).

are often confidential.¹²⁵ Thus, it falls to academia to provide the mock trial research that is the primary insight into jury behavior.

From a methodological perspective, mock jury research presents some special challenges. To induce an accurate response from the participants, most mock jury experiments require a great deal of effort in attempting to replicate as much of the trial process as possible by using, *inter alia*, realistic trial settings, lawyer arguments, and judicial instructions.¹²⁶ It is generally assumed that such realism, or “verisimilitude”, produces more accurate results.¹²⁷ The inverse assumption is that study participants may be less likely to provide accurate information in the context of a clearly hypothetical setting.¹²⁸ The latter statement’s presumption of inaccuracy stems in part from the notion that participants who know that the consequences of their decisions will not impact actual people or companies may make different choices.¹²⁹ This failure to give a response in a laboratory setting that accurately reflects true jury decisionmaking can be referred to as a “hypothetical bias.”¹³⁰ To give a dramatic example, most would agree that it is much easier to vote for the application of the death penalty if it is understood that no one will actually die as a result. One might reasonably question the conclusion of a hypothetical study regarding the likelihood of a death penalty jury verdict on that basis alone.¹³¹ Courts have shown a reticence to use information from jury studies that seem overly affected by hypothetical bias.¹³² Increased realism in a study is an

¹²⁵ See, e.g., Charles W. Ehrhardt, *Confidentiality, Privilege and Rule 408: The Protection of Mediation Proceedings in Federal Court*, 60 LA. L. REV. 91, 95–96 (1999) (reviewing the confidentiality provisions for federal ADR).

¹²⁶ See Diamond, *supra* note 6, at 561–62 (noting that it was suggested that the use of certain techniques could improve jury simulations, including “using videotaped trials instead of short, written vignettes as experimental stimuli; studying juror or community-member respondents rather than students from college subject pools; using more ecologically valid dependent measures,” and finding many of these techniques to have subsequently been adopted).

¹²⁷ See *id.* See also KASSIN & WRIGHTSMAN, *supra* note 12, at 18 (“[W]e can say, as a general rule, that the more closely our research conditions approximate the real event, the better off we are trying to generalize from the former to the latter.”).

¹²⁸ See FINKEL, *supra* note 43, at 58–61 (“[T]he more the experiment departs from realism, the louder the criticism, in general.”).

¹²⁹ See Saks, *supra* note 7, at 7 (“The problems often raised about mock juries are that . . . the stakes are different because no one’s fate actually turns on the jury’s verdict . . .”); MacCoun, *supra* note 40, at 13–14 (“The most obvious difference [between mock jury studies and actual trials] is that mock (and shadow) jurors know that their judgments will not have serious consequences (beyond contributing to the scientific study of juries).”).

¹³⁰ This phenomenon has been very well characterized in the context of choices wherein one must make an economic commitment. See *infra* Part IV.A.

¹³¹ This bias is also described as a “role playing” effect because the mock jurors are called to play the role of a real juror. See Dillehay & Nietzel, *supra* note 6, at 250–51. In other words, they are required to predict their own behavior in a real trial. There is doubt as to how accurate people are at accomplishing this. *Id.* at 251 (“People seem unable to predict how they or others will behave when it come to passing judgments on others or taking harmful actions against them. This research is not reassuring where a generalization from role playing research (or a likeness of it) to courtroom decisions against another person is concerned.”).

¹³² See, e.g., Lockhart v. McCree, 476 U.S. 162, 171 (1986) (in criticizing jury studies cited to the court, Chief Justice Rehnquist noted that they “were based on the responses of individuals randomly selected from some segment of the population, but who were not actual jurors sworn under oath to apply the law to the facts of an actual case involving the fate of an actual capital defendant. We have serious doubts about the value of these studies in predicting the behavior of actual jurors.”).

attempt to counter hypothetical bias by ensuring that all of the reticence, anger, and fear that would affect a juror in a real trial are in play.¹³³

How real must a study be to avoid this problem? In recent years, several authors have addressed this issue by comparing mock jury results to actual verdicts (or other external measures), concluding that the level of realism in most current studies is apparently adequate to generate reliable results.¹³⁴ However, the comparison of a few studies to actual jury behavior does not prove that hypothetical bias is *never* relevant (and the authors of such studies do not claim as much).¹³⁵ To be fair, establishing such an extreme proposition would involve the impossible task of proving a negative. But even in the context of a more general conclusion that the moderate realism that exists in a typical mock jury experiment is sufficient, one must keep in mind that it likely depends on the facts of a particular case. Different litigation issues may require different levels of realism.¹³⁶ For example, the experimental conditions that may be acceptable for determining whether a jury pool is likely to be biased against a local corporation—which could probably be determined accurately by conducting something as simple and low-tech as a telephone survey—may not be acceptable for assessing the likelihood that a jury will understand the most important aspects of a complex intellectual property infringement analysis. In fact, there is no way to know for sure that one is achieving acceptable realism in a given experiment without actually comparing the results to real life,¹³⁷ which is often impossible given the factual distinctiveness of tried cases. Therefore, no matter how similar to a real trial,¹³⁸ controlled experiments contain an inherent element of artificiality and one must always be concerned that the results will be skewed.¹³⁹ Aside from larding on additional elements of realism, traditional academic studies

¹³³ See FINKEL, *supra* note 43, at 59–60.

¹³⁴ See Devine et al., *supra* note 45, at 698–99 (“[T]he available data suggest that mock juries operate similarly to actual juries in any case” (citations omitted)); Bornstein, *supra* note 7, at 88 (“Two decades of additional research support Bray & Kerr’s conclusion, regarding the ecological validity of jury simulations, that ‘the pattern of results does not warrant the negative reactions of some evaluators.’ These findings bode well for the feasibility of generalizing from simulation studies to the behavior of real jurors.”). *But see* Saks, *supra* note 7, at 7 (noting that some researchers have found differences in jury verdicts rendered under different degrees of similarity to actual trial conditions).

¹³⁵ See MacCoun, *supra* note 40, at 14. Surprisingly, compared to the number of jury studies that have been conducted, relatively few have looked into issues of ecological validity. *See also* Bornstein, *supra* note 7, at 88.

¹³⁶ See Diamond, *supra* note 6, at 564 (noting that some abbreviated experiments can be useful for answering some questions about jury behavior).

¹³⁷ See MacCoun, *supra* note 40, at 14 (“Investigators can never guarantee that the results of a simulation study will generalize to actual juries.”).

¹³⁸ One must keep in mind that there are limits to how many elements of a real trial one can incorporate into an experimental setting. Any differences have the potential to affect the results. *See* KASSIN & WRIGHTSMAN, *supra* note 12, at 18.

¹³⁹ See Vladimir Konecni & Ebbe Ebbesen, *External Validity of Research in Legal Psychology*, 3 *LAW & HUM. BEHAV.* 39, 64–65 (1979) (critique on the external validity of research on setting of bail and sentencing that concludes “We believe, first of all, that the results of research efforts that deal with the real-world, consequential legal decisions are far more informative than those that deal with simulated decisions.”); Gordon Bermant, Mary McGuire, William McKinley, & Chris Salo, *The Logic of Simulation in Jury Research*, 1 *CRIM. JUST. & BEHAV.* 224, 229–32 (1974) (assesses the verisimilitude present in the inputs of various methods of mock jury research); Dillehay & Nietzel, *supra* note 6, at 248–52.

in the field of psychology provide no methods for circumventing hypothetical bias.¹⁴⁰

Outside of the traditional experimental study format, there is another, somewhat obvious, method for avoiding hypothetical bias: lie to the participants. In other words, one could attempt to convince the mock jurors that they are in fact taking part in a real trial with real consequences. Although few would go so far as to create a fictional courtroom complete with litigants, judges, and witnesses simply to obtain an additional notch of accuracy from study participants, less burdensome methods of shading the truth are commonly employed. For example, one could tell a mock jury panel that its answers may be used by both parties to resolve the litigation, when they are actually available only to one.¹⁴¹ A major problem with this approach is that one must assume that the mock jurors believe the lie.¹⁴² Interestingly, this method of countering hypotheticality is essentially unavailable for the academic studies that answer the broad questions on jury behavior because the ethics rules that bind academic researchers generally prevent even this relaxed form of lying.¹⁴³

While hypothetical bias could be a significant problem in any mock jury experiment, it is reasonable to assume that it may be most prevalent in those involving cases where non-trivial mental effort is required. That is

¹⁴⁰ Although some suggest that recent studies using jurors in actual cases effectively addresses this issue (“The research described in this Article was designed to avoid the limitations of the Hannaford, et al. research by providing a direct window on the processes of discussion and deliberation as well as additional indices of juror behavior and performance.”), that conclusion is questionable. See Shari Seidman Diamond, *Juror Discussions During Civil Trials: Studying an Arizona Innovation*, 45 ARIZ. L. REV. 1, 16 (2003). This is because the participants (most particularly, the juries) know that they are involved in a research study, and this knowledge may affect their results. *Id.* at 17 (“In addition to the judges who agreed to participate in the project, the jurors, litigants, and attorneys in each case in the study were required to give their consent.”). Contrast this with the Chicago Jury Study in which study participants were recorded without their knowledge. KALVEN & ZEISEL, *supra* note 49, at xv (“The move was undertaken, with the consent of the trial judge and counsel, but without the knowledge of the jurors . . .”).

¹⁴¹ This technique has been used to varying degrees in summary jury trial procedures. See Richard A. Posner, *The Summary Jury Trial and Other Methods of Alternative Dispute Resolution: Some Cautionary Observations*, 53 U. CHI. L. REV. 366, 386–87 (1986) (“Some judges tell the jury at the outset that its verdict will only be advisory—which is likely to reduce the verdict’s informational value; other judges tell the jury after it has rendered its verdict; some never tell it.” (footnote omitted)). However, in that context, it can have more deleterious effects on the judicial system due to potential for prospective jurors to connect deception with the veneer of government jury service. *Id.*

¹⁴² There is evidence against this contention. See, e.g., D.W. Wilson & E. Donnerstein, *Guilty or Not Guilty? A Look at the “Simulated” Jury Paradigm*, 7 J. APPLIED SOC. PSYCHOL. 175, 185 (1977) (finding no difference between subjects who knew experiment was hypothetical and those who allegedly believed the impact was real); Dillehay & Nietzel, *supra* note 6.

¹⁴³ See THE BELMONT REPORT, ETHICAL PRINCIPLES AND GUIDELINES FOR THE PROTECTION OF HUMAN SUBJECTS OF RESEARCH, NAT’L COMM’N FOR THE PROTECTION OF HUMAN SUBJECTS OF BIOMEDICAL AND HUMAN BEHAVIORAL RESEARCH (1979). If a need can be shown, however, a researcher may be able to obtain permission to lie to participants:

A special problem of consent arises where informing subjects of some pertinent aspect of the research is likely to impair the validity of the research. In many cases, it is sufficient to indicate to subjects that they are being invited to participate in research of which some features will not be revealed until the research is concluded. In all cases of research involving incomplete disclosure, such research is justified only if it is clear that (1) incomplete disclosure is truly necessary to accomplish the goals of the research, (2) there are no undisclosed risks to subjects that are more than minimal, and (3) there is an adequate plan for debriefing subjects, when appropriate, and for dissemination of research results to them.

Id.

because participants will not expend the effort to resolve the issues if the results do not matter.¹⁴⁴ Unfortunately, these may constitute some of the country's most economically important cases. Non-trivial mental effort is often required in highly complex cases, such as pharmaceutical or biotechnology intellectual property disputes.¹⁴⁵ Additionally, an above-average amount of mental effort may be required even in more mundane cases that simply drag on for weeks or months, requiring the jury to keep a laundry list of facts and witness testimony in mind.¹⁴⁶ Hypothetical bias must be squarely addressed in such cases to make the jury process reasonably predictable.

The effects of unpredictability due to hypothetical bias may additionally be magnified in the context of cases involving non-trivial mental effort because questions especially significant in those fields have not been aggressively tackled by academic jury researchers. As a general matter, cases involving considerable mental effort constitute a minority of the research contexts. Most jury studies focus on simple criminal case issues,¹⁴⁷ and questions of particular interest in the complex civil context, such as whether jurors will be influenced by their own self-interest,¹⁴⁸ have received less attention. In combination with the fact that fewer studies exist, the notion that hypothetical bias may preclude reliable results means that there is very little on which to base a prediction of jury research. Openings into the black box are plugged and the jury may continue to be viewed with great concern by litigants.

If the issue of verisimilitude in mock jury research could be conclusively resolved, it would be the ideal study format. Thus, one is compelled to ask, are current efforts the best that can be done? Perhaps there is a better solution for resolving the issues attendant to hypothetical bias than attempting to create an unknowably sufficient amount of realism.

¹⁴⁴ See Diamond, *supra* note 6, at 567 ("What then distinguishes the real decision for the respondent? Presumably, a juror in a real case is more motivated to attend to the trial evidence to determine the verdict he or she really prefers, and to persuade fellow jurors that the jury verdict is consistent with the preference."). See also Peter Diamond & Jerry Hausman, *Contingent Valuation: Is Some Number Better Than No Number?* 8 J. ECON. PERSP. 45 (1994) (reviewing the concept). This concept was effectively articulated by Vernon Smith decades ago. Professor Smith presented conditions necessary for incentive compatible behavior and noted that when the perceived utility from the experiments reward (if any) do not outweigh the expenditure of effort (or other variables), there is no incentive to participate fully. See Vernon Smith, *Experimental Economics: Induced Value Theory*, 66 AM. ECON. REV. 274, 274-75 (Supp. 1976).

¹⁴⁵ See Moore, *supra* note 40, at 365 ("Honest to God, I don't see how you could try a patent matter to a jury. . . . It's like somebody hit you between your eyes with a four-by-four. It's factually so complicated.") (quoting U.S. Dist. Ct. Judge Alfred Covello's statement in *Judicial Panel Discussions on Science and Law*, 25 CONN. L. REV. 1127, 1145 (1993)).

¹⁴⁶ According to the Administrative Office of the U.S. Courts, 40 federal civil trials and 57 federal criminal trials took more than 20 days to complete in 2002. See ADMIN. OFF. OF THE U.S. CTS., *supra* note 64, at tbl 4.4.

¹⁴⁷ See generally Devine et al., *supra* note 45.

¹⁴⁸ This surfaces often in intellectual property cases because jurors are often called upon to decide whether a party should retain a property right in useful and desirable information, or if it should be available for the low-cost benefit of the public (*i.e.*, validity and enforceability of the right). See, e.g., *Minn. Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1301 (Fed. Cir. 2002) (whether a patent is invalid because it is anticipated by a piece of prior art is a question of fact that may be decided by a jury); *Leigh v. Warner Bros., Inc.*, 212 F.3d 1210, 1213 (11th Cir. 2000) (whether a defendant infringed a plaintiff's copyright is a question of fact for the jury).

Some of the most exciting possibilities may be derived from looking outward to fields not commonly associated with jury research. In particular, the field of economics suggests some particularly useful techniques that could allow researchers to bypass the problem of hypothetical bias altogether by combining jury decisionmaking with real incentives for mock jury participants to reveal accurate opinions. The merger of economics concepts with the excellent work that already exists in the field of psychology could provide some of the most significant opportunities for breakthrough jury research.

IV. INTEGRATING EXPERIMENTAL ECONOMICS TO FILL THE GAPS

Although economic theory and analysis of human behavior seem strange bedfellows, economics and law are far from unacquainted. One of the most significant theoretical movements of the last thirty years has been the study of “law and economics,” which predicated the analysis of legal rules on the goal of economic efficiency.¹⁴⁹ In addition to that societal goal, law and economics is a behavioral theory—it suggests that individuals desire wealth maximization and react in response to economic incentives.¹⁵⁰ This has been used to define and explain contractual negotiation constructs in areas such as broadcast spectrum auctions¹⁵¹ and software end-user licensing agreements.¹⁵²

The most attractive aspect of economic analysis as applied to law may be that it allows for quantification and objectively certain results.¹⁵³ It is possible to make theoretical predictions as to how economic actors will behave given a set of rules and conditions, and the analysis of the model allows insight prior to any actual implementation. So long as individual reasoning can be understood in terms of economics, successful and unsuccessful strategies to achieve a particular goal can be defined. This may make it a bit easier to forge (and defend) new rules in socially fragile areas such as tort reform.¹⁵⁴ Law and economics lends itself to *a priori* construction of legal regimes as opposed to the patchwork approach of *a posteriori* revision of negative outcomes.¹⁵⁵

¹⁴⁹ ROBERT COOTER & THOMAS ULEN, *LAW & ECONOMICS* 3–4 (4th ed. 2004) (“Economics predicts the effects of policies on efficiency. Efficiency is always relevant to policy making, because it is always better to achieve any given policy at a lower cost than a higher cost.”).

¹⁵⁰ *Id.* (“Generalizing, we can say that economics provides a behavioral theory to predict how people respond to changes in law.”).

¹⁵¹ See, e.g., Symposium, *The Law and Economics of Property Rights to Radio Spectrum*, 41 J.L. & ECON. 521 (1998).

¹⁵² See, e.g., Daniel R. Cahoy, *Oasis or Mirage?: Efficient Breach as a Relief to the Burden of Contractual Recapture of Patent and Copyright Limitations*, 17 HARV. J.L. & TECH. 135 (2003).

¹⁵³ See COOTER & ULEN, *supra* note 149, at 3 (“Economics has mathematically precise theories (price theory and game theory) and empirically sound methods (statistics and econometrics) of analyzing the effects of prices on behavior.”).

¹⁵⁴ George L. Priest, *Procedural Versus Substantive Controls of Mass Tort Actions*, 26 J. LEGAL STUD. 521, 570–73 (1997) (discussing the reasonableness and effectiveness of judges reviewing class action claims on the merits prior to certification).

¹⁵⁵ See COOTER & ULEN, *supra* note 149, at 10 (noting that law and economics teaches that law can be an incentive for changing behavior rather than simply a tool for providing justice after the fact).

Despite its acceptance as a useful theoretical construct for guiding the formation of legal rules, law and economics as applied to human behavior in authentic legal situations such as jury decisionmaking has met with less approval. Perhaps the most significant barrier to its use is that pure economic analysis necessarily requires presumptions regarding the cognitive framework available to human actors. This has not been well received in the fields usually responsible for studies into jury behavior, particularly psychology. From the perspective of those fields, which have a great deal of collective experience in analyzing human behavior, economic models used to predict and define human cognition are overly simplistic and incomplete in view of the complex behavior that is known to underlie real human decisionmaking.¹⁵⁶ In particular, the traditional economists' reliance on the "rational actor" has met increasing resistance as theories utilizing the concept have become more widely discussed.¹⁵⁷

It would, however, be a mistake to dismiss economic theory as being completely inapplicable to research that considers complex and undefined human behavior in law. Modern economics research has made strides in attempting to address the issue of model simplicity in order to provide results with broader applicability.¹⁵⁸ Most importantly, one can see that the field has evolved dichotomous branches that attempt to address this same basic concern in different ways. At least one of the branches, "experimental economics,"¹⁵⁹ provides an alternative approach to theoretical modeling that could be particularly useful in hypotheticality. It may be possible to use aspects of experimental economics methods to resolve (or greatly alleviate) the "hypothetical bias" issues that plague psychology-based studies. Such an endeavor obviously requires open-mindedness on the part of academics and practitioners who are unaccustomed to combining theory from outside their field, but it has the potential to make jury research more effective and reliable.

¹⁵⁶ See, e.g., Kenneth G. Dau-Schmidt, *Economics and Sociology: The Prospects for an Interdisciplinary Discourse on Law*, 1997 WIS. L. REV. 389, 397 (1997) ("The assumptions of the neoclassical model are clearly unrealistic, and the importance of this lack of realism has been a matter of some debate both within and outside the discipline."); Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051, 1077-82 (2000).

¹⁵⁷ See, e.g., Daniel McFadden, *Rationality for Economists?*, 19 J. RISK & UNCERTAINTY 73, 97 (1999) ("Confronted with the accumulated experimental evidence, economists must recognize that the Chicago-man model does not apply universally, or even regularly, to choices made in non-market contexts.").

¹⁵⁸ See, e.g., Robert A. Prentice, *Chicago Man, K-T Man, and the Future Behavioral Law and Economics*, 56 VAND. L. REV. 1663, 1667 (2003) ("Dissatisfaction with this state of affairs gave rise to a movement, variously called Behavioral Law and Economics (BLE), Behavioral Decision Theory (BDT), and Legal Decision Theory (LDT), that seeks to provide a more descriptively and predictively accurate account of human behavior; this is done by replacing the law and economics movement's stylized rational man model with a more accurate model based on empirical research arising from psychology, cognitive science, behavioral biology, decision theory, and related fields.").

¹⁵⁹ While it is not exactly accurate to state that experimental economics developed to address realism in economics research, as the field has a much more diverse and rich history (see *infra* notes 176-77 and accompanying text), one can see that this is one of the goals and the research implicitly does experimentally what behavioral law and economics sets out to do theoretically. Thus, it should be understood that the link between the two is perhaps reflected by the author's own analysis more than generally accepted understanding.

A. BRANCHING MOVEMENTS REGARDING ECONOMIC INFLUENCES ON HUMAN BEHAVIOR: THEORETICAL AND EXPERIMENTAL

Traditional economics, “microeconomics” to be more specific, provides useful insight into human behavior by making assumptions regarding the desires of individuals and determining the outcome of interactions given a set of facts.¹⁶⁰ The assumptions are often intuitive and most certainly play a role in real decisionmaking, such as the notion that individuals wish to achieve the best economic outcome for themselves.¹⁶¹ Some are useful constructs for creating theory but may not provide a complete picture of human behavior, such as the concept that people are rational decisionmakers—*i.e.*, when they are presented with choices, they will choose the best.¹⁶² In fact, most academics now believe that the rational economic actor does not completely explain human behavior.¹⁶³ The inability to capture all important factors in human decisionmaking has led to the criticism that economic models are artificial and less useful in real life situations.¹⁶⁴

The criticisms regarding economics may explain why there has been a reluctance to apply it extensively in real legal disputes. Although traditional economics as applied to law has been wildly successful as a theoretical approach, as demonstrated by the wealth of legal literature on the subject, it has arguably been much less influential on the practical issues that appear day-to-day in the courts.¹⁶⁵ Few judges have applied economic theory to resolve individual disputes,¹⁶⁶ and U.S. legislatures rarely rely on economic theory to underpin new laws.¹⁶⁷ Given the widespread concern that most economic theories are too simplistic to capture all of the factors that impact real decisionmakers, it is not surprising that the academic community has reacted to address the problem.

¹⁶⁰ See COOTER & ULEN, *supra* note 149, at 14.

¹⁶¹ See *id.* at 15.

¹⁶² See, e.g., W. Kip Viscusi, *Individual Rationality, Hazard Warnings, and the Foundations of Tort Law*, 48 RUTGERS L. REV. 625, 636 (1996) (stating that the “foundation of economic analysis of choice is based on the rationality of individual decision making.”). See also Anne C. Dailey, *The Hidden Economy of the Unconscious*, 74 CHI.-KENT L. REV. 1599, 1604 (2000). “Economic analysis has without question enjoyed a powerful and widespread influence within the legal academy over the last few decades.” *Id.* at 1600.

¹⁶³ See, e.g., Dau-Schmidt, *supra* note 156, at 397; Korobkin & Ulen, *supra* note 156, at 1077–82.

¹⁶⁴ See Korobkin & Ulen, *supra* note 156, at 1056 (“As the rate of increase in the breadth and usefulness of law-and-economics scholarship has declined, the shortcomings of rational choice theory have become more apparent. Behavioral anomalies and puzzles that rational choice theory (at least relatively strong versions) cannot explain—once little noticed because of the considerable utility rational choice theory did have—began to appear more significant as the economic analysis of law gained influence within the legal community.”).

¹⁶⁵ See, e.g., Eric A. Posner, *Economic Analysis of Contract Law After Three Decades: Success or Failure?*, 112 YALE L.J. 829, 869–70 (2003).

¹⁶⁶ See, e.g., *id.* (“Judicial opinions occasionally cite economic articles, and occasionally use economic concepts such as transaction costs and risk aversion. But it is hard to find cases where the judges self-consciously rely on an economic argument in order to justify a result.”).

¹⁶⁷ In fact, some legislation directly contradicts reasonable economic theory. A contentious example is the Sonny Bono Copyright Term Extension Act. See *Eldred v. Ashcroft*, 537 U.S. 186, 254 (2003) (Breyer, J. dissenting) (“First, no one could reasonably conclude that copyright’s traditional economic rationale applies here. The extension will not act as an economic spur encouraging authors to create new works.”).

Two major approaches are apparent that take strikingly different tacks: (1) behavioral law and economics and (2) experimental economics.

Behavioral law and economics melds the well-studied behavioral responses characterized by the field of psychology into economic analysis. It is a relatively new movement that calls on scholars to consider behavioral influences that may prevent individuals from making rational economic decisions.¹⁶⁸ Behavioral law and economics attempts to explain and incorporate into the analysis the psychology behind the decisions people make that cannot be explained by rational desire for wealth maximization.¹⁶⁹

In essence, because human behavior may act as a barrier to rational decisionmaking, its effects must be accounted for in theory. For example, one of the most important problems human behavior imposes is the inability of individuals to make overly complex decisions.¹⁷⁰ To account for this limitation, individuals may narrow their decisions to the choices that are simple, essentially ignoring those that would involve time-consuming analysis. The party is unwilling or unable to act as a rational decisionmaker by considering and quantifying all of the options. If one wished to fully model the forces affecting sufficiently complex decisions, the preference for simple analysis must be integrated.¹⁷¹

Unfortunately, because behavioral law and economics is a theoretical answer to traditional economics, it does not provide a great deal of assistance in alleviating hypothetical bias in jury *experimental* research. While the decisionmaking processes discussed in the literature will most definitely be relevant to a jury, such analysis does not allow one to predict jury behavior with any greater certainty than with any other psychology-based theory.

Experimental economics, on the other hand, endeavors to avoid the blinders of theoretical simplicity by directly studying the effects of economic incentives on real people in experimental situations. It is concerned with human behavior in an economics-influenced environment.¹⁷² Rather than relying solely on complex mathematical theories to predict behavior as traditional economists have, experimental economists observe actual human interaction.¹⁷³ One purpose is to test established economic theories and provide feedback to traditional

¹⁶⁸ See Korobkin & Ulen, *supra* note 156, at 1057–58. Several excellent academic pieces on the subject have appeared in recent years. See, e.g., Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998); Robert A. Prentice, *The Case of the Irrational Auditor: A Behavioral Insight into Securities Fraud Litigation*, 95 NW. U. L. REV. 133 (2000); Cass R. Sunstein, *Behavioral Law and Economics: A Progress Report*, 1 AM. L. & ECON. REV. 115 (1999).

¹⁶⁹ See Korobkin & Ulen, *supra* note 156, at 1057–58.

¹⁷⁰ See *id.* at 1077–82.

¹⁷¹ See *id.* at 1082–83.

¹⁷² An excellent source of a definition of experimental economics is available at http://www.gametheory.net/Dictionary/Experimental_Economics.html.

¹⁷³ See Alvin Roth, *Introduction to Experimental Economics*, in THE HANDBOOK OF EXPERIMENTAL ECONOMICS 21–23 (John H. Kagel & Alvin E. Roth, eds., 1995).

economists on gaps or inconsistencies.¹⁷⁴ The converse is also possible: to use an experiment to derive the theories.¹⁷⁵ Experimental economics avoids the problems of predictive models that must rely on fictional, economically-rational individuals.

Since, at its essence, experimental economics is merely the conduct of experiments based in economic theory, one can trace a much longer history than behavioral law and economics.¹⁷⁶ However, its prominence as an academic discipline has only recently reached a crescendo, with the most visible example being the conferring of the Nobel Prize to one of the most established practitioners, Vernon Smith.¹⁷⁷ As more fields become aware of the contributions of experimental economics, it will undoubtedly have even greater influence.

As with experiments in the field of psychology (and probably all other fields dealing with human behavior), economists undertaking experiments have had to contend with the problem of hypothetical bias. But the method for resolving the bias is a key area in which experimental economics diverges from other disciplines. Rather than attempting to thwart the bias by increasing the realistic atmosphere of the studies, experimental economics researchers design studies in which the economic consequences are, in fact, real.¹⁷⁸ In other words, the participants actually benefit or lose depending on their decisions.¹⁷⁹ For example, if one wished to understand the behavior of individuals in the market for a particular good or service, one would run an experiment in which that good or service would be acquired by the participants.¹⁸⁰ Of course, in some cases it would be impossible to tie the literal economic subject of the experiment into the laboratory system due to expense or limited availability of the item in real life.¹⁸¹ In those cases one may be compelled to use a proxy incentive—one that provides similar consequences in the hope that the incentive will be

¹⁷⁴ See *id.* at 22 (referring to the variety of experiments termed by the author “speaking to theorists,” explaining that they include “experiments designed to test the predictions of well articulated formal theories, and to observe unpredicted regularities, in a controlled environment that allows these observations to be unambiguously interpreted in relationship to the theory.”).

¹⁷⁵ See *id.* (referring to the variety of experiments termed by the author “searching for facts,” explaining that they include “experiments study the effect of variable about which existing theory may have little to say.”).

¹⁷⁶ See *id.* at 4 (noting that one could plausibly pin down the first economic experiment to have taken place in the year 1738).

¹⁷⁷ See THE BANK OF SWEDEN PRIZE IN ECONOMIC SCIENCES IN MEMORY OF ALFRED NOBEL 2002, available at <http://www.nobel.se/economics/laureates/2002/> (noting that Vernon Smith received half of that year’s prize “for having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms.”).

¹⁷⁸ See Roth, *supra* note 173, at 5–6 (noting that as early as the 1940s, criticism regarding hypothetical choices in economics experiments became widely acknowledged as a result of a paper by W. Allen Wallis and Milton Friedman, and since that time the use of real incentives have become a fundamental aspect of experimental economics).

¹⁷⁹ See *id.* at 67–72 (discussing the problem of “preference reversals” that occur between predicted behavior based on wealth maximization and observed behavior).

¹⁸⁰ See, e.g., David Aadland & Arthur J. Caplan, *Willingness to Pay for Curbside Recycling With Detection and Mitigation of Hypothetical Bias*, 85 AM. J. AGRIC. ECON. (2003) (tested for and detected significant hypothetical bias using stated and revealed preference data on willingness to pay for curbside recycling).

¹⁸¹ For example, one might want to know about individual choice behavior in the context of buying and selling real property, but it would be impractical to actually transfer property in the context of an experiment.

perceived in the same way.¹⁸² In that manner, the participants are still induced to provide the responses they would if the consequences were real (though, one must ensure that an incentive sufficient to induce the response is provided).¹⁸³

There are several examples of the importance of economic incentives in inducing accurate responses in non-legal contexts. One of the well-researched contexts is contingent valuation, which is the assessment of an individual's willingness to pay for particular contingencies to determine which is most valuable to the public.¹⁸⁴ In one of the seminal discussions of the problems inherent in this analytical method, Professors Diamond and Hausman reviewed surveys that purported to gauge how much value people placed on public goods, such as cleaning up polluted rivers and lakes.¹⁸⁵ The participants in the surveys stated valuations of several options without being accountable for any actual monetary expenditure.¹⁸⁶ Diamond and Hausman noted that, in some situations at least, what subjects say they would do in hypothetical situations does not necessarily correspond to behavior in real life.¹⁸⁷ They concluded that the effect was so profound that information gleaned from contingent valuation surveys was actually *worse* than no information at all.¹⁸⁸

Several other studies have noted the hypothetical effect in the absence of the proper economic motivation. For example, Professors Bishop and Heberlein found that the amount of money people were willing to spend for deer hunting permits was overstated when compared to a situation in which they would have to actually spend cash.¹⁸⁹ Professor List showed that sports card dealers significantly overstate their bids for a sports card in a hypothetical situation.¹⁹⁰ Additionally, Professors List and Shogren found that the selling price for a gift is significantly higher in an actual situation as compared to a hypothetical.¹⁹¹ Professor Ding, et al., recently found that subjects were more price-sensitive and had a different preference structure for Chinese dinner specials when their decisions resulted in a real outcome (eating Chinese food).¹⁹²

¹⁸² See Smith, *supra* note 144 (referring to incentive alignment).

¹⁸³ See *id.*

¹⁸⁴ See Diamond & Hausman, *supra* note 144, at 47–48 (reviewing the concept).

¹⁸⁵ See *id.*

¹⁸⁶ See *id.*

¹⁸⁷ See *id.* at 55–58.

¹⁸⁸ See *id.* at 58–62 (“We believe that contingent valuation is a deeply flawed methodology for measuring nonuse values, one that does not estimate what its proponents claim to be estimating. The absence of direct market parallels affects both the ability to judge the quality of contingent valuation responses and the ability to calibrate responses to have usable numbers.”).

¹⁸⁹ See Richard C. Bishop & Thomas A. Heberlein, *Does Contingent Valuation Work?* in VALUING ENVIRONMENTAL GOODS: AN ASSESSMENT OF THE CONTINGENT VALUATION METHOD 123, 146–47 (R. Cummings, et al. eds., 1986).

¹⁹⁰ See John List, *Do Explicit Warnings Eliminate the Hypothetical Bias in Elicitation Procedures? Evidence from Field Auctions for Sportscards*, 91 AM. ECON. REV. 1498, 1501–02 (2001). The study found that dealers would pay \$107.89 for a 1982 Cal Ripkin, Jr. “Topps Trades” baseball card in a hypothetical situation, but only \$59.56 when the consequences were real.

¹⁹¹ See John A. List & Jason F. Shogren, *The Deadweight Loss of Christmas*, 88 AM. ECON. REV. 1350, 1354 (1998).

¹⁹² Min Ding, Rajeep Grewal & John Liechty, *Incentive-Aligned Conjoint Analysis*, J. MARKETING RES. (forthcoming Feb. 2005).

The information regarding the importance of utilizing economic incentives and consequences to induce real responses may provide the means for making jury studies more reliable. If this experimental economics technique can be combined with existing human behavior studies, more accurate and reliable results may be induced. However, because jurors are in a somewhat unique position compared to subjects in typical economic experiments, a significantly different research plan must be contemplated.

B. USING EXPERIMENTAL ECONOMICS IN THE ANALYSIS OF JURY
DECISIONMAKING: A METHOD FOR IMPROVING JURY SIMULATION
RESEARCH

In view of the clear advantages of using the incentive mechanisms of experimental economics research, the prospect of adding them to a traditional psychology-based jury study seems rather natural. However, this appears to be a heretofore undisclosed idea. A careful consideration of the intuitive as well as economic underpinnings of this combination of techniques demonstrates its potential effectiveness.

1. *Existing Studies Incorporating Economics into Jury Research*

Interestingly, the concept of using both theoretical economics and experimental economics to understand the behavior of American juries is not entirely new. Recently, studies have been conducted which investigate the group voting behavior of juries. Although these studies do little to uncover individual motivations and biases, they provide a useful introduction to experimental design of jury studies from an economic perspective.

In 1998, Professors Feddersen and Pesendorfer used theoretical economics to investigate whether unanimous voting generally produced as fair or accurate a result as non-unanimous verdicts.¹⁹³ The idea was to investigate the assumption inherent in the "Condorcet" jury theorem that a group will make a better decision than an individual because an aggregate of many decisions into one will tend to dilute the random outliers.¹⁹⁴ Feddersen and Pesendorfer looked into the possibility that strategic voting behavior by jurors (*i.e.*, voting based in part on how the other participants vote) affected the likelihood that they would reveal private information (such as whether the juror believes a defendant to be guilty in a criminal case).¹⁹⁵ They concluded that a juror's private information can be contradicted by her strategic voting behavior, making it more likely, for example, that an innocent person would be found guilty by a unanimous jury than by a jury in which each person's vote was weighed individually.¹⁹⁶

¹⁹³ See Timothy Feddersen & Wolfgang Pesendorfer, *Convicting the Innocent: The Inferiority of Unanimous Jury Verdicts Under Strategic Voting*, 92 AM. POL. SCI. REV. 23, 23 (1998).

¹⁹⁴ See *id.* ("Until recently, the literature has assumed that each juror will behave as if her vote alone determines the outcome.")

¹⁹⁵ See *id.*

¹⁹⁶ See *id.* at 31.

To test Feddersen and Pesendorfer's theoretical results (as well as others), Professors Guarnaschelli, McKelvey, and Palfrey conducted an experimental study of the rules underlying jury voting behavior.¹⁹⁷ Rather than forcing participants to make a decision of guilt or innocence for a defendant, Guarnaschelli et al. chose a much more abstract design. The experimental subjects used opaque jars of colored balls representing the state of the world: blue (which was analogized to innocent) and red (analogized to guilty).¹⁹⁸ One would obtain a signal as to the overall composition of the jar by individually viewing the color of one ball from the jar.¹⁹⁹ The incentive to vote correctly was provided by the fact that, for each round of voting, all jurors were paid fifty cents for a correct decision on the composition of the jar and five cents for an incorrect one.²⁰⁰ Applying the theories developed by Feddersen and Pesendorfer to this system, Guarnaschelli et al. confirmed some of the problems noted in the theoretical model of strategic voting behavior but disputed others, demonstrating the effectiveness of using incentive experiments in concert with theory.²⁰¹ Additionally, Guarnaschelli et al. used their experimental construct to show that problems with initial group behavior in juries could be cured with the introduction of deliberation (which is obviously more analogous to a real jury vote).²⁰²

While the above studies demonstrate the utility of using economic incentives to analyze the dynamics of group decisionmaking, they are not directly useful for uncovering the effect of specific, individual jury biases, which is arguably more relevant to the real world goal of resolving jury unpredictability. One must be able to test such issues in a realistic context. The economic incentive must be tailored to resolving the bias as it specifically affects mock juries without losing the context necessary to study whatever issue is of interest. Once the effect of the bias is characterized, experimental techniques can readily be derived.

2. *Integrating the Hypothetical Bias Corrective Mechanism from Experimental Economics into Mainstream Jury Research*

As described above, the primary hypothetical problem in a jury study is the lack of incentive to care about the two parties who are engaged in the fictional dispute. The effect of hypothetical bias is that study participants do not have strong incentives to spend the cognitive efforts required to identify an accurate or reasonable answer.²⁰³ As a result, subjects' responses tend to be erratic. Based on the literature in other contexts,²⁰⁴ one can hypothesize that at least one of three major categories of specific cognitive failures may occur in jury studies: (1) mock jurors may expend

¹⁹⁷ See Serena Guarnaschelli, Richard D. McKelvey & Thomas R. Palfrey, *An Experimental Study of Jury Decision Rules*, 94 AM. POL. SCI. REV. 407 (2000).

¹⁹⁸ See *id.* at 407–08.

¹⁹⁹ See *id.*

²⁰⁰ See *id.* at 412.

²⁰¹ See *id.* at 419.

²⁰² See *id.*

²⁰³ See Diamond & Hausman, *supra* note 144, at 55–58.

²⁰⁴ See *supra* Part IV.A.

less mental effort than a real jury in determining an appropriate decision, (2) mock jurors may not gather enough relevant information to have the ability to make an appropriate decision, even if the requisite effort were expended, due to a lack of attention paid to the hypothetical facts, and (3) individuals may behave differently in response to the personal satisfaction gained when their decision results in a socially desirable outcome, even if it has no direct personal impact, and no such satisfaction will be gained from a hypothetical study.

To understand how economic incentives can resolve hypothetical bias in juries, it is helpful to consider the circumstances of a jury in economic terms. When presented with a task, a rational individual will evaluate the tradeoff between the benefit and cost of that task and make a decision so that his/her utility from performing (or not performing) this task will be maximized. One can imagine three basic cost/benefit components that impact decision making. The first component is the disutility from the effort (e_i) that an individual (i) expends to fulfill jury duty. This would include such baseline costs as the time to travel to the courthouse and sitting and listening to the trial, but it also includes efforts toward making the right decision that a particular juror may or may not decide to expend, such as paying close attention to testimony (or just staying awake). The second cost/benefit component is the personal utility one derives from the decision. This could be divided further into direct utility, a benefit that is a consequence of the decision such as cash payments or fame, and latent personal utility, a benefit that indirectly follows from the decision such as sending a message to the government or society.²⁰⁵ The amount of latent personal benefit depends on effort, while direct personal benefit does not. One may define $u_{ip}(e_i)$ as an individual i 's personal utility, u_{ip}^0 as the direct personal utility, and $u_{ip}^1(e_i)$ as the latent personal utility, thus:

$$u_{ip}(e_i) = u_{ip}^0 + u_{ip}^1(e_i)$$

A third cost/benefit component is the social utility a juror derives from making the best decision possible for the parties in the case. This can be further divided into a participation utility, derived from fulfilling one's duty as a citizen, and a justice utility, derived from knowing that the welfare of the parties in the case has been affected equitably. The amount of justice utility a jury obtains depends positively on the effort spent in making a good decision, while the participation depends on nothing more than showing up. If one defines $u_{is}(e_i)$ as individual i 's social utility, u_{is}^0 as the participation utility, and $u_{is}^1(e_i)$ as the justice utility, this component may be modeled as follows.

$$u_{is}(e_i) = u_{is}^0 + u_{is}^1(e_i)$$

Combining all of the components, the utility function for individual i as a juror is thus:

²⁰⁵ The most pertinent example of this is "jury nullification," where a juror disregards facts and the law to avoid a perceived injustice. See Lars Noah, *Civil Jury Nullification*, 86 IOWA L. REV. 1601, 1604–05 (2001) ("Nullification occurs whenever a jury intentionally ignores the trial judge's instructions on the applicable law.").

$$\begin{aligned}
 U_i(e_i) &= u_{ip}(e_i) + u_{is}(e_i) - e_i \\
 &= u_{ip}^0 + u_{ip}^1(e_i) + u_{is}^0 + u_{is}^1(e_i) - e_i
 \end{aligned}$$

Alternatively, if one assumes that a juror will be unable to derive latent personal utility in many, if not most cases, the utility model could be simplified as:

$$U_i(e_i) = u_{ip}^0 + u_{is}^0 + u_{is}^1(e_i) - e_i$$

This is what an experimental jury study should attempt to achieve.

However, participants in mock jury studies have a substantially different utility model due to several missing components (or parts of components). Because a mock jury study is hypothetical and there is no real consequence for the decision, a mock juror does not experience any social utility. Furthermore, that juror will also have no latent personal gain. Thus, the utility formula is simply:

$$U(e) = u_1^0 - e$$

Note that the missing pieces are those that depend on effort. As a result, a mock juror will likely spend a quantitatively different amount of effort than a juror in a non-hypothetical context. Depending on the amount of effort a real trial would compel in a given juror, the results obtained in the two contexts could be quite dissimilar. Given this economic model of the various types of real and mock jury scenarios, it is possible to intuit what is necessary to increase the accuracy of mock juries.

To correct for the hypothetical bias, it is important that an incentive-aligned mechanism be implemented that will give a mock juror additional utility that is consistent with what that person would have received by serving on a real jury. Of the three missing utility components ($u_{ip}^1(e_i)$, u_{is}^0 , and $u_{is}^1(e_i)$), the first two can be readily remedied. The component $u_{ip}^1(e_i)$, latent personal utility, is less common in most cases and could be remedied by allowing an individual to receive additional personal compensation if that person's decision follows the pattern suggested by the self-interest bias under study. The component u_{is}^0 , participation utility, could be added back to a mock juror's utility by paying that juror an additional fixed amount of money.

The third component, justice utility ($u_{is}^1(e_i)$), is most critical in biasing mock juror decisions and presents the biggest challenge for researchers and practitioners. Unfortunately, the solution applied in a typical experimental economics study will not suffice. One cannot introduce the economic incentive of simply paying the participants for their effort (or by extension, a right answer) without losing the realism and context of the experiment. This is because real jurors are, of course, not paid depending on how they decide. Introducing such an incentive into the experiment, as in Guarnaschelli et al.,²⁰⁶ may actually create a less realistic response and

²⁰⁶ See *supra* notes 197–201 and accompanying text.

further cloud the results.²⁰⁷ One can view the difference in terms of different categories of incentives as in Figure 1, below:

Figure 1

Types of Incentives

	Study Design	Incentive
Type 1	Conventional Mock Jury Study	Hypothetical, no real consequence
Type 2	Real Jury	Has real consequence, but impacts parties other than the decision maker
Type 3	Conventional Experimental Economics Study	Has real consequence, impacts the decision maker

To reasonably approximate the mindset of an actual jury, a means of connecting the consequences of the hypothetical case to a *third party* is necessary (Type 2), rather than directly connecting the consequences to the jury study participants themselves (Type 3).

There are potentially many different ways to implement such a mechanism, but at a minimum the following characteristics must be satisfied:

- The mechanism must be based on social utility (or utility derived from rearranged welfare distribution among third parties) instead of personal utility.
- The incentive increases at a decreasing rate as effort increases. Specifically, more effort should lead to higher social utility (as it becomes more accurate), but at a decreasing rate (concave).
- The incentive mechanism must be adjusted for each case. The nature of the mechanism should be similar to that in the case if possible; furthermore, the magnitude of the incentive should be correlated with the nature of the case.

Perhaps the most simple and direct implementation of these concepts is to take the mock jury decision and apply the economic impact to a real person or persons who are not involved in the deliberation. In other words, the real person serves as a proxy for the litigant in the hypothetical case scenario, suffering or benefiting from the jury's decision. The mock jurors will see the real results of their decisions and understand that they are not hypothetical. Of course, a potential problem with this proxy method is that

²⁰⁷ This is because mock jurors who are directly paid for their decision may experience more incentive to work hard than an actual jury does in deciding a case for people with whom they have no connection.

the impact will fall far below the impact of a real jury decision in scale, providing an insufficient incentive. For example, if a real case concerns \$100 million in sales of a product that infringes a copyright, using \$100 as a proxy incentive may not be enough to capture the impact on a juror, even if it is allocated to real people.

As an alternative, one could simply create an incentive for jurors to put forth effort to get the right answer which is sufficiently motivating, but does not unrealistically benefit the juror individually. This would be an incentive for the mock jurors to reach the “correct” decision, *i.e.*, the decision a real juror would make if he or she put in the typical effort as opposed to simply one that has an effect on the parties. To accomplish this, the incentive must be tied into an unknown but objectively agreeable determination of the outcome that is made by third party (even a real jury in a subsequently decided case). The closer the mock juror gets to that decision, the more the incentive should apply. Thus, one would expect additional effort on the part of the mock jurors that reasonably approximates the effort expended by real jury members.

Following the characterization of hypothetical bias for a particular context, one may use the above-described experimental construct to derive alternate techniques for neutralizing hypothetical bias that could impact broader issues. For example, the connection between juror pay and cognitive effort could be analyzed. One might theorize that a subject who is paid more for participation is likely to be less biased.²⁰⁸ Although standard theory argues that payment (regardless of the amount) does not matter because the subjects are compensated without consideration of their decisions, there is reason to believe that people will actually expend less mental effort and pay less attention when they are paid little. This is because participants find their service to be appropriately rewarded if the payment is close to their opportunity cost.²⁰⁹ Furthermore, an objectively small payment may be interpreted as a reflection of the low value society places on the service (*i.e.*, rendering a verdict). This diminishes the appreciation of social utility from jury service and could increase the effect of self-interest bias in particular. Thus, adjusting the payments may ameliorate the effects of the biases.

A second potential neutralizing approach is to explicitly warn subjects about their biases. By explaining a bias to the participants, it is likely that they will make a particular effort to avoid such bias. Such cheap talk has actually been found to eliminate hypothetical bias in other settings.²¹⁰

Through the combination of established psychology experimental constructs with the incentive alignment theories of experimental economics, a more accurate and thereby useful means of understanding

²⁰⁸ This is especially important in the context of juries, who are paid a small amount to serve, and are additionally compelled to appear by law. The extent to which payment can compensate for self-interest bias in particular has relevance to efforts to reform jury pay. See Lilly, *supra* note 16, at 77–78.

²⁰⁹ Opportunity cost is the utility (e.g., money) a person would otherwise obtain if a given action is not taken. In this case, the utility (or amount of money) a subject would make if he/she chose to use the time used for the study to do something else.

²¹⁰ See Diamond & Hausman, *supra* note 144.

jury behavior can be introduced. Although experimentation is certainly required to bear out these ideas, ideological barriers could forestall such work unless the relevant researchers maintain an open mind.

V. AN EXAMPLE EXPERIMENT WITH UNDERLYING ECONOMIC RATIONALE

Because an important first step in establishing the need for economic incentives to eliminate hypothetical bias in mainstream jury research is to determine the magnitude of the bias effect for a given study, a preliminary experiment should be considered. One would expect varying levels of hypothetical bias to exist in different contexts depending on the degree to which real-world impacts compel a study participant to reveal the decision she would make as an actual juror.²¹¹ A controlled study using a given scenario with and without the incentive-alignment mechanism should establish a solid indication of the degree of bias present.

The most challenging part is to craft an incentive-alignment mechanism of sufficient heft to mimic the responsibility given to real jurors without resorting to the use of an incentive that conveys a personal benefit to the study participant. There are certainly many possible designs for such a mechanism, but one possible embodiment of the incentive-aligned mechanism above could work as follows:

- (1) Identify two parties, one of which should be generally considered to deserve money (such as a well-respected charity like UNICEF or the Make-A-Wish Foundation), while the other party does not (such as a random passerby in the street);
- (2) Randomly pick a verdict from a group of mock jurors and compare that verdict to a reference decision (*e.g.*, a legally correct or appropriate decision) and calculate the percentage of deviation from the reference decision (*e.g.*, 20%); and
- (3) Divide a certain amount of cash (*e.g.*, \$200) by providing the undesirable party (*e.g.*, the passerby) with the total amount multiplied by the deviation (*e.g.*, $\$200 * 20\% = \40), and providing the desirable party (*e.g.*, UNICEF) with the rest (\$140).

The above steps must be explained to the hypothetical jurors *before* they make their decision in the case.

Using the above mechanism, the mock juror is incentive-aligned to identify the standard decision to the best of their ability, because they derive positive utility for giving the money to charity while deriving negative utility for giving money to someone who simply receives a

²¹¹ One could imagine that the effects in some types of studies would be sufficiently small as to suggest that a corrective mechanism is overkill. However, as stated in *supra* Part III.B., one can never really know until the effect is determined.

windfall due to simple luck (being chosen randomly).²¹² In other words, one would anticipate that the participants will attempt to avoid taking money away from the charity and giving it to a random individual by working harder, paying greater attention, etc.

Mathematically, this system could be represented as:

$$u_{2m}^1(e) = \alpha(R-r) \left[1 - \frac{\Delta(e)}{L} \right] - \beta \left[(R-r) \frac{\Delta(e)}{L} + r \right]$$

where

- α = the utility coefficient for giving money to charity;
- β = the utility coefficient for giving money to someone who does not deserve it;
- R = the total amount of money at stake;
- r = the initial fixed payment to the individual;
- L = the standard decision provided by legal experts;
- $l(e)$ = the decision provided by the mock jury; and
- $\Delta(e)$ = the deviation between mock jury decision and the standard decision, it is assumed to be decreasing at an decreasing rate (convex) as the effort increases. It is defined as $\Delta(e) = \min \{L, |l(e) - L|\}$.

Assuming that all of the utilities are factored in, it could be shown that the incentive-alignment mechanism should produce greater cognitive effort:

$$\frac{\partial(u_{2m}^1(e))}{\partial e} = - \frac{(\alpha + \beta)(R-r)}{L} \frac{\partial(\Delta(e))}{\partial e}$$

$$\frac{\partial^2(u_{2m}^1(e))}{\partial e^2} = - \frac{(\alpha + \beta)(R-r)}{L} \frac{\partial^2(\Delta(e))}{\partial e^2}$$

In other words, $u_{2m}^1(e)$ is indeed increasing at decreasing rate (concave) as the effort increases.

This is, of course, only one possible permutation of the use of economic incentives to improve jury research. It is presented primarily as a conceptual model and a road map for future research (some of which will be conducted by the authors). Most importantly, one should take away from this model the ease of incorporating economic incentives and the magnitude of their potential impact on modern jury research, as well as on the future of the American jury.

VI. CONCLUSION

Despite concern, fear, or even outright distrust, the jury is an integral part of the judicial system in the United States. However, there is a danger

²¹² This, of course, assumes that the participants care about the charity. One should take care to use a charity with broad appeal and sympathetic recipients.

that negative perceptions regarding juries may erode the jury's effectiveness and significantly impact its future role. Only through accurate research can these perceptions be rejected or, if necessary, addressed head-on through reform. Unfortunately, as it exists today, jury research cannot fully accomplish this mission. To make jury research as accurate and relevant as possible, methods from diverse fields such as experimental economics must be seriously considered so that we can have a truly unoccluded view into the black box of jury behavior.