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## The Limits of a Scientific Jurisprudence: The Supreme Court and Psychology

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# The Limits of a Scientific Jurisprudence: The Supreme Court and Psychology

J. ALEXANDER TANFORD\*

## INTRODUCTION

The dominant criticism of law is that it is indeterminate, incoherent and contradictory.<sup>1</sup> The law and society movement, building on the work of legal realists, proposes a solution: a shift to an interdisciplinary, more scientific jurisprudence. Scholars from Habermas<sup>2</sup> to Posner<sup>3</sup> assert that the crisis in modern legal culture will lead courts to give social science a more prominent role in the formation of legal policy. If precedent and judicial intuition cannot supply a clear answer to a legal problem, maybe empirical social science can. At least the apparent neutrality of science can help courts legitimate their decisions in hard cases. Commentators offer familiar examples, such as footnote eleven in *Brown v. Board of Education*,<sup>4</sup> as evidence that social science has already begun to find a place in the Supreme Court's jurisprudence.

To all appearances, social psychology and the law of trials should be natural allies in the forefront of this movement. A substantial part of the American trial system is implicitly based on psychology:

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1. *E.g.*, Kress, *Legal Indeterminacy*, 77 CALIF. L. REV. 283, 283-84 (1989); *see also* Singer, *The Player and the Cards: Nihilism and Legal Theory*, 94 YALE L.J. 1, 11-14 (1984); Unger, *The Critical Legal Studies Movement*, 96 HARV. L. REV. 561, 578 (1983).

2. J. HABERMAS, *TOWARD A RATIONAL SOCIETY* 81-85 (J. Shapiro trans. 1970) (scientific progress undermines traditional legitimating myths and forces state to increasingly rely on science as an apparently neutral basis for political decisions; scientific rationality legitimates the expanding power of state as it intervenes in market to perpetuate obsolete forms of domination).

3. *E.g.*, R. POSNER, *ECONOMIC ANALYSIS OF LAW* 20-21 (3d ed. 1986) (economic theory provides power to explain and clarify values in many fields of law; the stamp of economic reasoning can be seen in property, contracts, tort and criminal law; economics provides "true" grounds for many judicial opinions).

4. 347 U.S. 483, 494 n.11 (1954) (citing several social-scientific sources as supporting the proposition that segregation has a detrimental effect).

Many of the most fundamental assumptions underlying courtroom trials are psychological assumptions. For example, the entrusting of ultimate decision-making powers to juries [is] a policy that assumes that such groups can understand their task, set aside personal prejudices, reliably judge the credibility of witnesses, and collectively apply the law to reach a just verdict. Even the choice of an adversarial system of justice makes important psychological assumptions concerning methods of enhancing the perceived fairness and justness of the legal process. In short, the operation of the courts is predicated upon a host of psychological assumptions about just how the key actors in the court (judges, attorneys, defendants, witnesses, and jurors) can and will behave under a variety of conditions.<sup>5</sup>

Lawyers already rely on psychologists to help plan effective trial tactics.<sup>6</sup> Many courts now accept social psychologists as expert witnesses on issues such as the problems of eyewitness identification and rape trauma syndrome.<sup>7</sup>

The Supreme Court, however, has not welcomed empirical research on jury behavior when deciding evidence and trial procedure cases. Instead, the Justices seem to react to it with distrust and suspicion.<sup>8</sup> They continue to approve legal rules based on intuitive assumptions about human behavior that research by psychologists has shown to be erroneous.<sup>9</sup>

From 1970 to 1988, the United States Supreme Court decided ninety-two cases concerning the propriety of various rules of evidence and trial procedure.<sup>10</sup> In most of these cases, relevant psychological literature on juror

5. Kerr & Bray, *The Psychology of the Courtroom: An Introduction*, in *THE PSYCHOLOGY OF THE COURTROOM* 2 (N. Kerr & R. Bray eds. 1982).

6. See Tanford & Tanford, *Better Trials Through Science: A Defense of Psychologist-Lawyer Collaboration*, 66 N.C.L. REV. 741, 775-79 (1988).

7. See, e.g., *United States v. Downing*, 753 F.2d 1224 (3d Cir. 1985); *State v. Chapple*, 135 ARIZ. 281, 660 P.2d 1208 (1983) (both cases acknowledging the need to present jurors with expert testimony about the unreliability of eyewitness identification); see also Greene, Schooler & Loftus, *Expert Psychological Testimony*, in *THE PSYCHOLOGY OF EVIDENCE AND TRIAL PROCEDURE* 206-20 (S. Kassir & L. Wrightsman eds. 1985) (summarizing the admissibility of expert testimony on several types of novel psychological evidence, such as rape trauma syndrome); Walker & Monahan, *Social Frameworks: A New Use of Social Science in Law*, 73 VA. L. REV. 559 (1987) (discussing the admissibility of expert testimony to provide jurors with a frame of reference in which to make better decisions about contested facts).

8. See, e.g., Chief Justice Rehnquist's opinion in *Lockhart v. McCree*, 476 U.S. 162, 168-73 (1986), in which he spends six pages attacking scientific literature that reaches a conclusion he does not like.

9. See, e.g., *Watkins v. Sowders*, 449 U.S. 341, 347 (1981), in which the Court concludes that eyewitness identification is no different from other kinds of testimony, and that jurors will be presumed to be able to accurately assess the reliability of eyewitness identification. Both these premises are contrary to the psychological literature. See Wells, *The Eyewitness*, in *THE PSYCHOLOGY OF EVIDENCE AND TRIAL PROCEDURE*, *supra* note 7, at 57-61.

10. Because it is my intention to study the impact of the social-psychology of jury behavior, I have included all civil and criminal cases that significantly involved a question of evidence, trial law or trial procedure. They are listed *infra* in Appendix II. I have not included cases raising pretrial procedural issues (e.g., discovery) that might affect a subsequent trial, sufficiency of evidence issues, or the substantive validity of jury instructions. I have included death penalty cases that focus on the procedure for trying capital cases, but not those that question the constitutionality of the death penalty.

behavior was readily available in interdisciplinary journals,<sup>11</sup> widely circulated books,<sup>12</sup> law reviews,<sup>13</sup> journals for practicing lawyers,<sup>14</sup> law student textbooks<sup>15</sup> and even the popular press.<sup>16</sup> In a number of instances, the Justices were provided with nonpartisan amicus briefs explaining in detail relevant jury behavior research.<sup>17</sup> In some cases, the Justices even acknowledged the existence of empirical data.<sup>18</sup> Yet, not a single Supreme Court majority opinion has relied even partly on the psychology of jury behavior to justify a decision about the proper way to conduct a trial.

The Court's refusal to base its trial process decisions on psychology cannot be dismissed with the familiar claim that social science is inconclusive because there are always experts on both sides.<sup>19</sup> With respect to some issues that have reached the Court, psychologists have arrived at a clear consensus about the effect that a procedure would have on the jury and the trial.<sup>20</sup>

11. *E.g.*, Cowan, Thompson & Ellsworth, *The Effects of Death Qualification*, 8 LAW & HUM. BEHAV. 53 (1984); Suggs, *The Use of Psychological Research by the Judiciary: Do Courts Adequately Assess the Validity of the Research?*, 3 LAW & HUM. BEHAV. 135 (1979) (effects of reducing jury size); Wissler & Saks, *On the Inefficacy of Limiting Instructions: When Jurors Use Credibility Evidence to Decide Guilt*, 9 LAW & HUM. BEHAV. 37 (1985).

12. *E.g.*, V HANS & N. VIDMAR, *JUDGING THE JURY* (1986); R. HASTIE, S. PENROD & N. PENNINGTON, *INSIDE THE JURY* (1983); D. HOROWITZ & R. WILLGING, *THE PSYCHOLOGY OF LAW* (1984); M. SAKS & R. HASTIE, *SOCIAL PSYCHOLOGY IN COURT* (1978); B. SALES, *THE TRIAL PROCESS* (Perspectives in Psychology series 1981); *THE PSYCHOLOGY OF EVIDENCE AND TRIAL PROCEDURE*, *supra* note 7; *THE PSYCHOLOGY OF THE COURTROOM*, *supra* note 5.

13. *E.g.*, Lempert, *Uncovering "Nondiscernible" Differences: Empirical Research and the Jury-Size Cases*, 73 MICH. L. REV. 644 (1975); Suggs & Sales, *Juror Self-Disclosure in the Voir Dire: A Social Science Analysis*, 56 IND. L.J. 245 (1981).

14. *E.g.*, Colley, *Style, Structure and Semantics*, TRIAL, July 1983, at 86 (effect of word choice and language); Etzioni, *Creating an Imbalance*, TRIAL, Nov.-Dec. 1974, at 28 (psychological jury selection).

15. *E.g.*, W LOH, *SOCIAL RESEARCH IN THE JUDICIAL PROCESS: CASES, READINGS & TEXT* (1984); J. TANFORD, *THE TRIAL PROCESS: LAW, TACTICS AND ETHICS* (1983).

16. *E.g.*, Etzioni, *Threatening the Jury Trial*, Wash. Post, May 26, 1974, at C3, col. 1 (jury selection procedures); Loftus, *Reconstructing Memory: The Incredible Eyewitness*, PSYCHOLOGY TODAY, Dec. 1974, at 116-19 (problems of eyewitness identifications).

17. *E.g.*, Brief for Amicus Curiae the American Psychological Association in Support of Respondent, *Lockhart v. McCree*, 476 U.S. 162 (1986) (No. 84-1865) [hereinafter *Lockhart* Brief].

18. *E.g.*, *Carter v. Kentucky*, 450 U.S. 288, 302 n.20 (1981).

19. See M. SAKS & C. BARON, *THE USE/NONUSE/MISUSE OF APPLIED SOCIAL RESEARCH IN THE COURTS* 75 (1980) (transcript of conference on the use of social science by courts; remarks by law Professor Stephen Breyer that there are always social scientists on each side, and arguing that he could produce a scientist to testify in favor of any proposition); see also Stryker, *Limits on Technocratization of the Law: The Elimination of the National Labor Relations Board's Division of Economic Research*, 54 AM. SOC. REV. 341, 342-43 (1989) (expressing doubts about whether the incorporation of science into law is dependent in any way on it being used on both sides of an issue); R. Stryker, *Limits on Technocratization of the Law: The Elimination of the NLRB's Division of Economic Research* (Univ. Microfilms 1987) (available at the University of Michigan libraries) (detailed historical development of the same argument).

20. Scientific consensus does not mean that scientists stop being skeptical or discontinue their attempts to falsify that consensus. Nor does it mean that there are no crackpots or

For example, psychologists agree that eyewitness identification of strangers is unreliable,<sup>21</sup> that the process of death-qualification creates a conviction-prone jury,<sup>22</sup> and that jurors have difficulty following instructions to disregard or limit their use of prejudicial evidence.<sup>23</sup> Yet, the Supreme Court has approved trial procedures inconsistent with each of these findings.<sup>24</sup>

In some situations, of course, the Court must choose between the need for fair, accurate trials and competing public policies. Empirical research might demonstrate that trials reach better results when all relevant evidence is presented in a publicity-free proceeding, yet the Court may be asked to compromise pursuit of this ideal for the sake of preserving a free press,<sup>25</sup> deterring police misconduct<sup>26</sup> or protecting the institution of marriage.<sup>27</sup> However, of the ninety-eight Supreme Court cases on trial procedure decided since 1970,<sup>28</sup> only a few clearly required the Court to make such a choice.<sup>29</sup> In the overwhelming majority of these cases, the Court appeared to consider only whether a contested procedure interfered with the operation of a fair trial. Even then the Court would not accept help from psychologists.

This Article explores the puzzling disjunction between the psychology of juror behavior and the Supreme Court's jurisprudence of juror behavior. Part I describes the interdisciplinary context in which the issue is located. Part II analyzes the Supreme Court's treatment of psychology in its trial law cases, focusing on a dozen cases in which the Justices must have been aware of the scientific literature, because it was cited in one of the opinions or presented in the briefs.<sup>30</sup> Part II also demonstrates that the Justices consistently ignore, distort and display hostility towards the empirical research,

pseudo-scientists who dispute that consensus. See Gieryn, Bevins & Zehr, *Professionalization of American Scientists: Public Science in the Creation/Evolution Trials*, 50 AM. SOC. REV. 392, 400-02 (1985).

21. See Wells, *supra* note 9, at 48-57.

22. Lockhart Brief, *supra* note 17, at 3.

23. L. WRIGHTSMAN, *PSYCHOLOGY AND THE LEGAL SYSTEM* 250 (1987).

24. See *United States v. Owens*, 484 U.S. 554 (1988) (holding that eyewitness identifications are reliable); *Lockhart*, 476 U.S. 162 (holding that death-qualified juries are impartial and not significantly conviction-prone); *Marshall v. Lonberger*, 459 U.S. 422, 438 n.6 (1983) (assuming jurors will follow an instruction to limit the use of highly inflammatory evidence).

25. *E.g.*, *Chandler v. Florida*, 449 U.S. 560 (1981) (television cameras in the courtroom).

26. *E.g.*, *United States v. Leon*, 468 U.S. 897, 907-08 (1984) (ruling on the scope of the rule excluding relevant evidence seized in violation of the fourth amendment in order to deter police misconduct).

27. *E.g.*, *Trammel v. United States*, 445 U.S. 40 (1980) (ruling on the scope of a defendant's privilege to prevent his spouse from testifying against him).

28. See *infra* Appendix II.

29. *E.g.*, *Trammel*, 445 U.S. 40 (fair trial versus marriage confidentiality).

30. In many other cases, it almost defies belief that among nine Supreme Court Justices and dozens of law clerks, no one was aware of psychological research that had been widely disseminated in legal periodicals. *E.g.*, *Burch v. Louisiana*, 441 U.S. 130 (1979) (constitutionality of five-out-of-six verdict in criminal case; no mention of jury size or unanimity studies); *Lonberger*, 459 U.S. at 438 n.6 (effect of limiting instruction discussed without reference to empirical research).

preferring to trust their own intuitions. Part III examines several theories offered to account for the disjunction between social science and law, but finds that none explains this result. Part IV proposes a new theory to explain why psychology may seem irrelevant to the Supreme Court, based on a comparison of the normative structures of the two disciplines.

## I. BACKGROUND

One of the important themes in law-and-society research is the extent to which social science is incorporated into the law.<sup>31</sup> Although much of this work concerns the legislative and executive branches of government,<sup>32</sup> some has focused on the courts. The best-known examples of this literature address the Supreme Court's controversial use of social science in *Brown v. Board of Education*.<sup>33</sup> However, other research has investigated more generally the interaction between the scientific and legal systems.<sup>34</sup> Some scholars have looked at how well social-scientific information is understood and used by the Supreme Court.<sup>35</sup>

Others have looked at the use of social science by intermediate appellate courts,<sup>36</sup> trial courts<sup>37</sup> and lawyers.<sup>38</sup> A few legal scholars have used social science as a vehicle for criticizing Supreme Court decisions.<sup>39</sup> Some social scientists have done the opposite, using legal decisions to criticize aspects of social theory.<sup>40</sup> However, little work has focused particularly on the

31. See Caplan, *Social Research and National Policy: What Gets Used, by Whom, for What Purposes and with What Effect?*, 38 INT'L SOC. SCI. J. 187 (1976); Ellsworth & Getman, *Social Science in Legal Decision-Making*, in LAW AND THE SOCIAL SCIENCES 581 (L. Lipton & S. Wheeler eds. 1986); M. SAKS & C. BARON, *supra* note 19; C. WEISS, *USING SOCIAL RESEARCH IN PUBLIC POLICY MAKING* (1977).

32. See, e.g., Fineman & Opie, *Uses of Social Science Data in Legal Policymaking: Custody Determinations at Divorce*, 1987 WIS. L. REV. 107 (legislative child custody preferences); Stryker, *supra* note 19 (discussing the NLRB).

33. *Brown v. Board of Education*, 347 U.S. 483, 494 n.11 (1954), is discussed by P. ROSEN, *THE SUPREME COURT AND SOCIAL SCIENCE* 173-77 (1972); Cahn, *Jurisprudence*, 30 N.Y.U. L. REV. 150 (1955); Dworkin, *Social Sciences and Constitutional Rights—The Consequences of Uncertainty*, 6 J. LAW & EDUC. 3 (1977).

34. See M. SAKS & C. BARON, *supra* note 19; Sperlich, *The Evidence on Evidence*, in THE PSYCHOLOGY OF EVIDENCE AND TRIAL PROCEDURE, *supra* note 7, at 326-52.

35. Alschuler, "Close Enough for Government Work": *The Exclusionary Rule After Leon*, 1984 SUP. CT. REV. 309 (critiquing *United States v. Leon*, 468 U.S. 897 (1984)).

36. See Suggs, *supra* note 11 (discussing a number of decisions by federal appeals courts and state appellate courts).

37. See Hans & Vidmar, *Jury Selection*, in THE PSYCHOLOGY OF THE COURTROOM, *supra* note 5, at 50-54 (discussing the problems of getting trial judges to accept survey data in change of venue decisions); Saks, *Innovation and Change in the Courtroom*, in THE PSYCHOLOGY OF THE COURTROOM, *supra* note 5, at 338-42 (sentencing decisions).

38. Tanford & Tanford, *supra* note 6, at 748-59.

39. Alschuler, *supra* note 35 (criticizing *Leon*, 468 U.S. 897); Lempert, *supra* note 13 (criticizing the Court's three jury-size cases).

40. E.g., Stryker, *supra* note 19 (critiquing and extending modern social theories of the state).

Supreme Court's use, or nonuse, of empirical research on jury behavior in formulating trial policy.

The branch of modern psychology devoted to empirical research on jury behavior and trial procedures developed in part as a response to a 1970 Supreme Court decision, *Williams v. Florida*.<sup>41</sup> In *Williams*, the Supreme Court was asked to review Florida's decision to reduce the size of criminal juries from twelve to six persons. Although most of the Court's opinion concerns prior legal precedent and the history of juries, the Justices also made two empirical assertions:

[First,] the reliability of the jury as a fact finder hardly seems likely to be a function of its size.

[Second,] while in theory the number of viewpoints represented on a randomly selected jury ought to increase as the size of the jury increases, in practice the difference between the 12-man [sic] jury and the six-man [sic] jury in terms of the cross-section of the community represented seems likely to be negligible.<sup>42</sup>

These assertions seemed to contradict psychological theory. They prompted several psychologists to begin research on the validity of these and other behavioral assumptions underlying the rules of evidence and trial procedure.<sup>43</sup>

Since 1970, there has been an explosion of applied psychological research concerning the trial process and jury behavior. By 1982, Bray and Kerr could identify over seventy completed experimental studies using mock jurors.<sup>44</sup> In 1988, Tanford and Tanford identified over 120 books and articles on the psychology of trial practice written since 1970.<sup>45</sup> Bibliographies in Kerr and Bray,<sup>46</sup> Kassin and Wrightsman<sup>47</sup> and Hastie, Penrod and Pennington<sup>48</sup> run to a combined total of over 100 pages.

Over the same eighteen-year period, the Supreme Court decided cases involving issues of juror behavior and trial procedure<sup>49</sup> as if no relevant

41. 399 U.S. 78 (1970).

42. *Id.* at 100-02. The Court implied that what little evidence there was showed no differences between six-person and 12-person juries. However, the Court cited only the opinions of lawyers for the proposition. *Id.* at 101.

43. See, e.g., S. NAGEL & M. NEEF, *LEGAL POLICY ANALYSIS: FINDING AN OPTIMUM LEVEL OR MIX* (1977) (jury size and unanimity); M. SAKS, *JURY VERDICTS* (1977) (jury size and verdicts); Bermant & Coppock, *Outcomes of Six- and Twelve-Member Jury Trials: An Analysis of 128 Civil Cases in the State of Washington*, 48 WASH. L. REV. 593 (1973) (jury size).

44. Bray & Kerr, *Methodological Considerations in the Study of the Psychology of the Courtroom*, in *THE PSYCHOLOGY OF THE COURTROOM*, *supra* note 5, at 288-89.

45. Tanford & Tanford, *supra* note 6.

46. *THE PSYCHOLOGY OF THE COURTROOM*, *supra* note 5, at 9-10, 34-37, 77-82, 111-15, 158-68, 191-94, 217-20, 253-56, 281-83, 318-23, 349-52.

47. *THE PSYCHOLOGY OF EVIDENCE AND TRIAL PROCEDURE*, *supra* note 7, at 38-39, 63-66, 92-94, 121-23, 147-49, 171-74, 198-200, 222-26, 250-52, 276-79, 296-97, 321-22, 354-61.

48. R. HASTIE, S. PENROD & N. PENNINGTON, *supra* note 12, at 247-65.

49. See *infra* Appendix II.

psychological research existed. Sometimes the Court's nonscientific approach was unavoidable. In a few cases, no empirical research had been conducted on the issues being litigated. In *Batson v. Kentucky*,<sup>50</sup> for example, the American Civil Liberties Union asserted that a jury without black members would give less credit to the testimony of black witnesses. No psychologist had published any research investigating that issue.<sup>51</sup> Similarly, in *Chandler v. Florida*,<sup>52</sup> a defendant objected to the presence of cameras in the courtroom, asserting that their presence would adversely affect the trial. The Court pointed to the absence of empirical data on such practices as one reason not to prohibit them.<sup>53</sup>

In a few other cases, the research was tentative or inconclusive. For example, in *Kentucky v. Stincer*,<sup>54</sup> the Court was asked to rule on the constitutionality of a rule protecting child sex abuse victims from having to confront defendants. The American Psychological Association (the "APA") filed an amicus curiae brief stating that psychologists did not yet know whether face-to-face confrontation between the victim and the accused would cause particular trauma to the child. They cited the few studies that had been done, indicating that the results were inconclusive. Some research suggested the child might be harmed, while other research suggested that a confrontation is cathartic and beneficial to the child.<sup>55</sup>

In some situations, the Court may have been unaware of available relevant research. Since neither the Justices nor their clerks are likely to be trained in psychology, they would probably only be alerted to relevant research if scientific literature were cited in the briefs or had been presented previously to the Court.<sup>56</sup> For example, in *Addington v. Texas*,<sup>57</sup> the Court was asked to determine the appropriate burden of proof in civil commitment trials. The Court lamented that there were no directly relevant empirical studies

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50. 476 U.S. 79 (1986).

51. The brief only cited irrelevant experiments on the problems of cross-racial identifications. Brief for the New York Civil Liberties Union and the American Civil Liberties Union as Amicus Curiae, *Batson*, 476 U.S. 79 (No. 84-6263) (citing E. LOFTUS, *EYEWITNESS TESTIMONY* (1979)); Malpass & Kravitz, *Recognition for Faces of Own and Other Race*, 31 J. PERSONALITY & Soc. PSYCHOLOGY 330 (1979).

52. 449 U.S. 560, 578-79 (1981).

53. The appellant appears to have looked for relevant research, but found only *irrelevant* studies about such matters as whether people become distracted by music or tend to conform when in public. Brief for Appellant at 28-31, *Chandler*, 449 U.S. 560 (No. 79-1260); cf. *Estes v. Texas*, 381 U.S. 532 (1965) (reaching an opposite result based on lack of empirical evidence to show cameras had *no* effect).

54. 479 U.S. 1303 (1987).

55. Brief for Amicus Curiae American Psychological Association in Support of Petitioner at 15-26, *Stincer*, 479 U.S. 1303 (No. 86-572).

56. Since law journals and interdisciplinary journals likely to be found in any standard library contain much relevant empirical work, this information was easily accessible had the Justices or their clerks bothered to look for it. However, my conversations with former Supreme Court clerks indicate that such proactive research is almost never undertaken.

57. 441 U.S. 418, 424 (1979).



on how jurors interpret the phrases "preponderance of the evidence," "clear and convincing" and "beyond a reasonable doubt." In point of fact, at least one such study did exist.<sup>58</sup>

The absence of interdisciplinary education can also result in the judges, clerks and lawyers involved in a case failing to recognize that a psychological issue is implicated. For example, in a series of cases about whether voir dire had been adequate to detect racially biased jurors,<sup>59</sup> everyone apparently assumed that jurors would admit to being racially biased if asked. They seemed unaware of either the large body of social psychology addressing human behavior in public settings, or the experiments specifically examining juror behavior, all of which cast doubt on the validity of that assumption.<sup>60</sup>

However, in some cases, none of the excuses work. Even when the Court clearly was aware of relevant psychological literature,<sup>61</sup> it still paid it little attention. The Court has consistently ignored or distorted the scientific literature on juror behavior and made assertions inconsistent with such literature in its opinions. In the following sections, cases in which the Supreme Court rejected empirical data on jury behavior will be analyzed and used to test traditional theories of the interaction between science and law

## II. THE SUPREME COURT'S TREATMENT OF PSYCHOLOGY

The Supreme Court has decided twelve cases with all five of the following characteristics: (1) a question of proper trial procedure was involved that required making an assumption about juror behavior, (2) the need for fair, reliable trials was the only public policy directly implicated by the decision, (3) relevant empirical research on juror behavior was available, (4) a consensus appeared to exist among social psychologists concerning the implications of that research and (5) the relevant psychological literature was cited either in the briefs or in one of the opinions. In ten of these cases, the Court based its decisions on intuitive assertions about juror behavior inconsistent with the empirical data. In the two cases in which the

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58. See R. SIMON, *THE JURY: ITS ROLE IN AMERICAN SOCIETY* 56 (1980) (tables 4-4 and 4-5); Simon & Mahan, *Quantifying Burdens of Proof: A View From the Bench, the Jury, and the Classroom*, 5 *LAW & SOC'Y REV* 319 (1971).

59. *Turner v. Murray*, 476 U.S. 28 (1986); *Ristano v. Ross*, 424 U.S. 589 (1976); *Ham v. South Carolina*, 409 U.S. 524 (1973).

60. See Balch, Griffiths, Hall & Winfree, *The Socialization of Jurors*, 4 *J. CRIM. JUST.* 271 (1976); Broeder, *Voir Dire Examinations*, 38 *S. CAL. L. REV* 503, 510-14 (1965); Helmreich & Collins, *Situational Determinants of Affiliative Preference Under Stress*, 6 *J. PERSONALITY & SOC. PSYCHOLOGY* 79 (1967); McGhee & Teevan, *Conformity Behavior and Need for Affiliation*, 72 *J. SOC. PSYCHOLOGY* 117 (1967); Suggs & Sales, *supra* note 13, at 259-60.

61. The cases are described *infra* in Appendix I.

Court and the psychologists agreed about how jurors behave, the Court made it clear that it was *not* relying on psychology.<sup>62</sup>

An examination of the written opinions in these cases reveals that the Justices ignored, misused, distorted and misinterpreted psychological literature about trials to justify decisions at odds with empirical data. This pattern is consistent with evidence that lower court judges tend to be hostile to social science,<sup>63</sup> that lawyers tend to be hostile toward scientists<sup>64</sup> and misunderstand or ignore social science<sup>65</sup> and that people generally undervalue social science and overvalue vivid anecdotes when making important decisions.<sup>66</sup> The Supreme Court's most explicit and detailed discussion of social psychology occurs in *Lockhart v. McCree*.<sup>67</sup> The case involved a claim that the process of death qualification<sup>68</sup> produces a jury biased in favor of the state at the guilt-determination stage, thus violating a defendant's right to an impartial jury. The APA filed an amicus curiae brief discussing at length the large body of data demonstrating that death-qualified juries are indeed conviction-prone. The APA concluded that "without credible exception, the research studies show that death qualified juries are prosecution prone, unrepresentative of the community, and that death qualification impairs proper jury functioning . . . . [T]he research clearly satisfies the criteria for evaluating the methodological soundness, reliability, and utility of empirical research."<sup>69</sup>

In the Supreme Court's majority opinion, Justice Rehnquist attacked the empirical studies. Despite assurances from the APA that the research was methodologically sound, and despite the fact that he has no training in

62. See *infra* Appendix I (*Carter and Gray* cases).

63. See Hans & Vidmar, *supra* note 37, at 54-55 (trial judges are hostile to statistical evidence in change-of-venue proceedings); Sperlich, *supra* note 34, at 337-42 (summarizing judicial complaints about science).

64. Stryker, *supra* note 19, at 351-53 (intra-agency squabbling between lawyers and economists contributed to the elimination of NLRB's Division of Economic Research).

65. Tanford & Tanford, *supra* note 6, at 748-59 (pointing out that lawyers misunderstand psychology); see also Wigmore, *Professor Muensterberg and the Psychology of Evidence*, 3 ILL. L. REV. 399 (1909) (ridiculing psychological research and belittling psychologists' offer to help construct more rational rules of evidence).

66. R. NISBETT & L. ROSS, *HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT* 55-56 (1980); Saks & Kidd, *Human Information Processing and Adjudication: Trial by Heuristics*, 15 LAW & SOC'Y REV. 123, 149 (1981); see also Thompson & Schumann, *Interpretation of Statistical Evidence in Criminal Trials: The Prosecutor's Fallacy and the Defense Attorney's Fallacy*, 11 LAW & HUM. BEHAV. 167 (1987) (college students misunderstood and underutilized statistics when playing the role of jurors).

67. 476 U.S. 162 (1986).

68. In *Witherspoon v. Illinois*, 391 U.S. 510 (1968), the Supreme Court approved the use in capital cases of a procedure whereby all prospective jurors who were opposed to the death penalty were excused for cause. This process has become known as "death qualifying" the jury. It is a significant strategic advantage to prosecutors because it enables them to remove hostile jurors without having to use up one of a limited number of peremptory challenges.

69. *Lockhart* Brief, *supra* note 17, at 3.

social science methods, Rehnquist devoted five pages of his majority opinion to assailing the methodology used in the cited research. Rehnquist's indictment of the empirical literature contains six counts: First, "only" six studies specifically demonstrated conviction-proneness, too small a number from which to draw reliable conclusions. Another eight corroborating studies were dismissed as having no value because they examined juror attitudes rather than actions.<sup>70</sup> Second, three of the six relevant studies had previously been presented to the Court in connection with another case,<sup>71</sup> at which time they were described as being too tentative to serve as a basis for a decision. Therefore, despite subsequent validating research, they were still of no value.<sup>72</sup> Third, three of the six studies demonstrating a strong conviction-proneness effect used randomly selected individuals, not real jurors actually sworn to apply the law. Therefore, the studies cannot predict the behavior of actual jurors and should be ignored.<sup>73</sup> Fourth, two experiments that did use actual jurors did not simulate the deliberation process, and therefore were of no value.<sup>74</sup> Fifth, the studies did not say whether the final result, considering all the evidence, would definitely be different if the jury were not death-qualified.<sup>75</sup> Finally, only one study investigated the possibility of the independent "nullifier" phenomenon, that is, whether someone opposed to the death penalty would vote not guilty just to prevent a death sentence.<sup>76</sup> Justice Rehnquist then contended that other serious methodological problems existed, but stated that he did not have time to mention them.<sup>77</sup>

There is, of course, a modicum of truth to several of these criticisms. One must be careful about over-generalizing from mock jury studies to real juries, from attitudes to actions, from pre-deliberation to post-deliberation decisions and from statistical significance to actual impact in real cases. However, these problems are well known to experimental psychologists. In the opinion of the APA, the variety of conditions under which the death-qualification experiments were conducted, the safeguards used, the number of replications and the complete absence of any data to the contrary justified the conclusion that death-qualified juries are in fact conviction-prone.<sup>78</sup>

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70. *Lockhart*, 476 U.S. at 169.

71. The other case was *Witherspoon*, 391 U.S. 510.

72. *Lockhart*, 476 U.S. at 170-71.

73. *Id.* at 171.

74. *Id.*

75. *Id.* at 171-72.

76. The study that did take into consideration "nullifiers" is the Cowan-Deliberation study. *Id.* at 172, n.12. Justice Rehnquist may have assumed that the presence of "nullifiers" would have to be a dependent variable, that is, would necessarily result in a not guilty vote.

77. Rehnquist wrote that he had only taken the time to identify "some of the more serious problems" with the studies, implying there are more that he did not discuss. *Id.* at 173 (emphasis added).

78. See *Lockhart* Brief, *supra* note 17, at 3.

Justice Rehnquist, however, exaggerated the significance of the criticisms, asserting that because such studies can be criticized, they are of no value. He then posited that even assuming the experiments were methodologically sound,<sup>79</sup> he still would not accept the psychologists' interpretation of the data. His majority opinion rejected the psychologists' finding that death-qualified juries are significantly conviction-prone, and substituted his own conclusion "that 'death qualification' in fact produces juries *somewhat* more 'conviction-prone' than 'non-death-qualified' juries."<sup>80</sup> The Justices then concluded that such a minimally conviction-prone jury from which biased death penalty opponents have been removed is not prosecution-biased at all, as psychologists assert, but rather is impartial.<sup>81</sup>

The Court's opinion in *Lockhart* suggests that most Justices are hostile towards social psychology, do not understand it,<sup>82</sup> believe that empirical research on juror behavior is no more reliable than intuition and anecdotal evidence, and ultimately believe that the science of psychology has little or no place in the jurisprudence of trial procedure. These attitudes are reflected in other cases as well. Justices Scalia, Rehnquist, O'Connor and White implied in *Gray v. Mississippi*<sup>83</sup> that the Court did not go far enough in *Lockhart* when it criticized the empirical research on conviction-proneness. They argued that the Court should not have admitted even a slight possibility that the conviction-proneness studies might be valid, but rather should have relied on its own intuitive conclusion that removing anti-death jurors "simply does not result in juries . . . tipped toward conviction."<sup>84</sup> In *Ballew v. Georgia*,<sup>85</sup> Justice Powell stated that he had strong reservations about the wisdom of basing Supreme Court decisions on empirical research even when it supported his position, derisively referring to reliance on statistical language as "numerology."<sup>86</sup> He even doubted the reliability of scientific

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79. *Lockhart*, 476 U.S. at 173.

80. *Id.* (emphasis added).

81. *Id.* at 177-78. The Court argued that even if death-qualified juries were slightly biased (which it did *not* concede), such a jury was still acceptable because it advanced the state's "legitimate interest in obtaining a single jury [for] both the guilt and sentencing phases of a capital trial." *Id.* at 175-76. The Court also asserted as a justification that because the appropriate sentence depends on the nature of the crime, some evidence would have to be presented twice if two juries were used. *Id.* at 180-81. This is not true, of course. The two juries could both be convened at the start of trial, and could sit together during the presentation of evidence, after which the representative jury would decide guilt, and then, if the defendant were convicted, the death-qualified jury would decide on the penalty. No evidence would have to be presented twice.

82. It is impossible to say whether the inability of intelligent judges to understand social science is genuine ignorance or contrived disingenuousness.

83. 481 U.S. 648 (1987).

84. *Id.* at 679.

85. 435 U.S. 223 (1978).

86. *Id.* at 246 (Powell, J., concurring). WEBSTER'S UNABRIDGED DICTIONARY (2d ed. 1975) defines numerology as a "system of occultism built around numbers."

research and the peer-review publication process, questioning the psychological research because "neither the validity nor the methodology employed by the studies cited was subjected to the traditional testing mechanism of the adversary process [but] merely represent unexamined findings of persons interested in the jury system."<sup>87</sup>

To the extent that the Justices acknowledge the existence of empirical research on juror behavior at all, they seem to consider it no more reliable than their own intuition and experience. Most of the Justices do not appear to believe that psychologists' training and expertise are of any particular value.<sup>88</sup> Moreover, they do not distinguish science from nonscience,<sup>89</sup> and are dubious of statistics.<sup>90</sup>

The Court's nonuse of psychology transcends its usual liberal-conservative political polarization. For example, Justices White, Rehnquist, O'Connor and Burger, who are generally considered politically conservative, have rejected studies showing that therapists cannot accurately predict the future dangerousness of mental patients,<sup>91</sup> and have relied instead on their intuition that such predictions can, in fact, be made.<sup>92</sup> Justices Blackmun, Brennan and Marshall, generally considered moderate to liberal, likewise have rejected scientific data showing that hypnosis detrimentally affects memory accuracy, and have relied instead on statements from an appellate opinion and a police investigation manual about the benefits of hypnosis.<sup>93</sup> A unanimous Court in *Holbrook v Flynn* rested its decision that a jury had not been biased by seeing the defendant surrounded by armed security guards on

87. *Ballew*, 435 U.S. at 246 (Powell, J., concurring). Powell's comment goes well beyond the more ordinary claim that judges are in a poor position to independently distinguish good science from bad science and therefore rely on the adversary system, especially cross-examination, to reveal the truth. Cf. Walker & Monahan, *supra* note 7, at 583-85 (arguing that it is inappropriate to subject scientific information, on which legal change will be based, to the adversary fact process for exactly the same reason—the judge will not be in any better position to judge good and bad science after an adversary battle of the experts).

88. Justice Powell will not even refer to psychologists as scientists, experts or professors, but calls them "merely persons interested in the jury system." *Ballew*, 435 U.S. at 246 (Powell, J., concurring).

89. See Gieryn, *Boundary-Work and the Demarcation of Science from Nonscience: Strains and Interests in Professional Ideologies of Scientists*, 48 AM. SOC. REV. 781 (1983); and Gieryn, Bevins & Zehr, *supra* note 20, for a discussion and an empirical examination of the process of distinguishing science from nonscience.

90. See *Ballew*, 435 U.S. at 246 (Powell, J., concurring) (equating reliance on statistics with numerology). I suspect, though I cannot prove, that most Justices would agree with Disraeli's opinion about the value of statistics ("There are three kinds of lies: lies, damned lies, and statistics.").

91. *Barefoot v. Estelle*, 463 U.S. 880, 896-99 (1983). The studies were presented to the Court in a brief filed by the American Psychiatric Association. Brief for Amicus Curiae American Psychiatric Association, *Barefoot*, 463 U.S. 880 (No. 82-6080).

92. *Barefoot*, 463 U.S. at 896-99.

93. *Rock v. Arkansas*, 483 U.S. 44, 58-62 (1987).

“[the Court’s] own experience and common sense” and rejected a contrary empirical study.<sup>94</sup>

Even when the Court concedes that there might be something credible to empirical research on jury behavior, most Justices dismiss it as irrelevant to a legal decision. Although they never say *why* psychology should not be used as a jurisprudential principle, the Justices make the point repeatedly. The message in *Lockhart* and other death penalty cases<sup>95</sup> is that even if the Justices believed the conviction-proneness studies, they would nevertheless approve the process of death-qualifying juries. In other cases, the Court says that it will not re-examine its own precedents even if empirical research demonstrates that their assumptions about juror behavior were probably wrong. If precedent and psychology conflict, they will choose precedent as the preferred basis for a decision. For example, in *Barefoot v. Estelle*, the Court rejected scientific research because it was “contrary to [its own] cases.”<sup>96</sup> In *Ballew*, Justice Blackmun stated that although empirical studies cast doubt on their original decision to approve six-person juries, the Court should “decline to reconsider” the issue.<sup>97</sup> Justice Powell agreed, writing that he did not see “the wisdom . . . [or] the necessity” of relying on statistics to make legal decisions.<sup>98</sup>

The Court prefers precedent to science even when science could support the Court’s decision. For example, in *Carter v. Kentucky*,<sup>99</sup> the Court concluded that jurors will comply with an instruction against drawing negative inferences from a defendant’s failure to testify. The Justices relied on precedent and their own intuitive assumptions that instructions must have *some* effect, relegating supportive empirical studies to a footnote.<sup>100</sup> In *Colgrove v. Battin*, Justice Marshall argued in dissent that using smaller juries in civil cases would produce greater variability of results and therefore should not be permitted. He summarized the empirical data that supported his position, but then expressly stated that he considered such data “ultimately irrelevant to the constitutional issue.”<sup>101</sup>

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94. 475 U.S. 560, 571 n.4 (1986).

95. *See, e.g.,* *Buchanan v. Kentucky*, 483 U.S. 402, 415 n.16 (1987) (refers to the *Lockhart* Court’s criticism of studies and its willingness to uphold death qualification even if studies were sound).

96. 463 U.S. at 896-97 (rejecting research on reliability of psychiatrists’ predictions of dangerousness).

97. 435 U.S. at 231-32 n.10 (Blackmun, J., plurality opinion).

98. *Id.* at 246 (Powell, J., concurring).

99. 450 U.S. 288 (1981).

100. *Id.* at 302-03. The Court ignored other empirical research that casts doubt on jurors’ abilities to follow this kind of limiting instruction. *See* Sue, Smith & Caldwell, *Effects of Inadmissible Evidence on the Decisions of Simulated Jurors: A Moral Dilemma*, 3 J. APPLIED SOC. PSYCHOLOGY 345 (1973); Wolf & Montgomery, *Effects of Inadmissible Evidence and Level of Judicial Admonishment to Disregard on the Judgments of Mock Jurors*, 7 J. APPLIED SOC. PSYCHOLOGY 205 (1977).

101. 413 U.S. 149, 167 n.1 (1973) (Marshall, J., dissenting).

In some cases, Supreme Court Justices simply ignore empirical research. In *Watkins v. Sowders*, the majority concluded that hearings out of the presence of the jury on the reliability of eyewitness identification are not required. The opinion asserted that eyewitness testimony is no different from any other kind of testimony, and that jurors will be able to accurately assess its reliability.<sup>102</sup> The majority made no reference whatsoever to the psychological literature demonstrating both assumptions to be false, even though Justice Brennan discussed it in some detail in his dissenting opinion.<sup>103</sup> Subsequently, in *United States v. Owens*,<sup>104</sup> the same research on eyewitness testimony was cited and discussed in one of the briefs, but the Justices ignored it completely. The majority and dissent debated whether an out-of-court statement of identification was sufficiently reliable to be used in court, without ever discussing the massive body of psychological research that had investigated the question.<sup>105</sup> Finally, in *Wainwright v. Witt* the majority approved a more lenient standard for removing anti-death jurors,<sup>106</sup> ignoring empirical research on conviction-proneness cited by the dissent.

Even when empirical research could help the Court justify a decision, the Justices have ignored it. In *Gray*,<sup>107</sup> the Court held that mistakenly excusing too many anti-death jurors is likely to have a significant impact on the outcome of a trial.<sup>108</sup> The opinion never referred to the psychological research confirming that such juries would be significantly conviction-prone, even though the literature had been cited in one of the briefs and had been hotly debated on the Court in each of the preceding two years.<sup>109</sup>

### III. THEORIES ON THE INTERACTION BETWEEN SOCIAL SCIENCE AND LAW

Theories on the interaction between social science and the law fall into two general categories. Some predict that science will eventually assume a prominent role in legal policy-making. If courts are not now using social science, it is because of particular obstacles that can be overcome. Other

102. 449 U.S. 341, 347 (1981).

103. *Id.* at 349-60 (Brennan, J., dissenting) (citing E. LOFTUS, *supra* note 51).

104. 484 U.S. 554 (1988).

105. *Id.* at 561 (statements of identification are just as reliable as other out-of-court statements); *id.* at 566 (Brennan, J., dissenting) (dangers of misidentification). There is a certain irony here. In *Ballew*, 435 U.S. at 246, Justice Powell concluded that reliable scientific research was untrustworthy because it was not subject to the traditional testing of the adversary system (cross-examination). Yet here, the court finds that *unreliable* eyewitness testimony is sufficiently trustworthy that it can be exempted from the traditional testing mechanism of cross-examination.

106. 469 U.S. 412, 423 (1985). This case was decided *before* the *Lockhart* Court's concession that there might be some validity to the conviction-proneness studies.

107. 481 U.S. 648.

108. *Id.* at 663.

109. *See Wainwright*, 469 U.S. 412; *Lockhart*, 476 U.S. 162.

theories posit that social science will not have much of an impact on the law in the foreseeable future for a variety of reasons.

Theories predicting that the courts generally will use and rely on science are of several different types. Robert Merton's theory of the sociology of science asserts that modern Western culture as a whole has elevated science to a prominent, often commanding position.<sup>110</sup> Judges are products of their culture and will therefore consciously or unconsciously incorporate social science into their opinions. Other theories suggest that science will be used instrumentally to bolster decisions reached on other grounds<sup>111</sup> and to hide the true political/ideological bases for those decisions,<sup>112</sup> at least to the extent that social science is readily accessible to judges.<sup>113</sup> This is consistent with neo-Marxist theory which views state reliance on science as a possible solution to the inevitable legitimization crisis produced by government intervention in economic processes.<sup>114</sup>

None of these theories is confirmed. The Supreme Court has not used readily available juror behavior research even when the data could have legitimated the Court's decisions. In other contexts as well, scholars have noticed that courts seem particularly averse to social science, displaying hostility toward it,<sup>115</sup> deriding the use of statistics,<sup>116</sup> dismissing empirical research as meaningless or infinitely malleable,<sup>117</sup> rejecting science as no more reliable than intuition,<sup>118</sup> or labeling science

110. See R. MERTON, *THE SOCIOLOGY OF SCIENCE* 267 (1973); see also Lempert, "Between Cup and Lip": *Social Science Influences on Law and Policy*, 10 *LAW & POL'Y* 167, 183-85 (1988) (social science percolates into culture, indirectly affecting legal decisions).

111. See M. SAKS & C. BARON, *supra* note 19, at 16; Lempert, *supra* note 110, at 184; but cf. Fahr, *Why Lawyers are Dissatisfied with the Social Sciences*, 1 *WASHBURN L.J.* 161, 166 (1961).

112. See, e.g., M. SAKS & C. BARON, *supra* note 19, at 10; Fineman & Opie, *supra* note 32, at 110. Much of this theory as applied to law seems to be derived from Habermas' philosophy. See, e.g., J. HABERMAS, *supra* note 2, at 81-82, 85 (arguing that scientific rationality allows those in power to stay dominant while appearing to be rational; the political character of domination becomes unrecognizable).

113. See Tremper, *Sanguinity and Disillusionment Where Law Meets Social Science*, 11 *LAW & HUM. BEHAV.* 267, 272 (1987).

114. See J. HABERMAS, *supra* note 2, at 101-05; Stryker, *supra* note 19.

115. See M. SAKS & C. BARON, *supra* note 19, at 3; Tremper, *supra* note 113, at 274.

116. See P. ROSEN, *supra* note 33, at 198-99; Dworkin, *supra* note 33, at 6; see also Maxwell v. Bishop, 257 F. Supp. 710, 720 (E.D. Ark. 1966) ("[T]he Court doubts that [racial] discrimination, which is a highly subjective matter, can be detected accurately by a statistical analysis . . . Statistics are elusive things at best, and it is a truism that almost anything can be proved by them."), *aff'd*, 398 F.2d 138 (8th Cir. 1968), *vacated on other grounds*, 398 U.S. 262 (1970); M. SAKS & C. BARON, *supra* note 19, at 75 (quoting well-respected law Professor Stephen Breyer as stating that he could produce a scientist to testify in favor of any position).

117. See M. SAKS & C. BARON, *supra* note 19, at 10-11.

118. See M. SAKS & C. BARON, *supra* note 19, at 16; Gieryn, Bevins & Zehr, *supra* note 20, at 396. Gieryn, Bevins and Zehr provide an excellent historical illustration of this symptom. In the Scopes trial, a schoolteacher was charged with violating a law prohibiting teaching evolution *inconsistent with the Biblical account of creation*. The defense sought to call expert



as evil.<sup>119</sup>

The question on which no consensus has been reached is *why* courts are reluctant to rely on empirical research. Theories that have been propounded offer a variety of possible explanations: (1) the political disjunction theory says judges are conservative and perceive social scientists to be liberal, (2) the conceit theory holds judges are conceited and do not believe they need any assistance from non-lawyers, (3) the human nature theory says judges are human, and it is human nature to be unscientific, (4) the ignorance hypothesis is that judges are ignorant of, inexperienced with, or do not understand empirical social science, (5) the threat theory holds judges perceive science as a threat to their power and prestige and (6) the rival-systems theory argues that law and social science are rival systems with competing logics.

The political disjunction theory holds that law is conservative and social science is liberal. The theory's proponents suggest that judges are predominantly politically conservative, and that the legal system based on *stare decisis* and precedent is also conservative.<sup>120</sup> In contrast, social science comprises disciplines committed to innovation, progress and change.<sup>121</sup> This difference in approach leads to distrust. Judges may conceive of psychologists as only pretending to be neutral while really favoring criminal defendants<sup>122</sup> and promoting hidden agendas of social change.<sup>123</sup> Hence

witnesses to explain to the jury exactly what the theory of evolution was, and that it was in fact consistent with much of the account of creation contained in Genesis. The judge ruled such evidence irrelevant on the grounds that the judge and jury could understand evolution just as well as scientists, and therefore did not need scientists to explain it to them. *See also* Fineman & Opie, *supra* note 32, at 110, 124-30 (a radical law professor asserts that her personal interpretation of social science data is just as valid as the scientists').

119. *See* J. BRONOWSKI, *SCIENCE AND HUMAN VALUES* 54 (rev. ed. 1965); Gieryn, Bevins & Zehr, *supra* note 20, at 395. For example, Judge David Bazelon has written that scientists often come to court with hidden agendas and often "fail to come clean" (that is, lie under oath) in their testimony. Bazelon, *Veils, Values, and Social Responsibility*, 37 *AM. PSYCHOLOGIST* 115, 115-17 (1982). Bronowski argues on a more philosophical level that social science is viewed as evil because it reveals what people *do*, rather than what they *ought* to do. What they *do* is often wicked. He argues that the righteous believe that the wicked flourish and become successful, so that if social scientists study what does or does not "work" within our wicked social framework, then it is studying (and promulgating) evil. J. BRONOWSKI, *supra*, at 54.

120. Haney, *Psychology and Legal Change: On the Limits of a Factual Jurisprudence*, 4 *LAW & HUM. BEHAV.* 147, 159-60 (1980).

121. *See* P. ROSEN, *supra* note 33, at 198-99; M. SAKS & C. BARON, *supra* note 19, at 3, 10-11.

122. Loh, *The Evidence and Trial Procedure*, in *THE PSYCHOLOGY OF EVIDENCE AND TRIAL PROCEDURE*, *supra* note 7, at 35-36. Of course, on the most general level, science is not "neutral." It will be influenced in what it studies, when it considers that a consensus has been reached and how results are interpreted in light of prevailing biases and theories. *See* T. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* 5-7 (2d ed. 1970). At the other end of the spectrum, individual scientists may misinterpret results because of personal biases. However, science as a whole, through the peer-review publication process and the ideology of objectivity and consensus, tends to eliminate the kind of extreme biases the judges are worried about. Science obviously will reflect some of the same cultural norms that law also reflects, but this is not the kind of bias feared by judges.

123. Bazelon, *supra* note 119, at 115-17

judges may believe that the results of empirical research are unreliable because they have been distorted by the scientists' liberal values.<sup>124</sup>

There are four problems with the political disjunction hypothesis. First, judges are not all alike. They are not likely to universally adhere to any one political philosophy.<sup>125</sup> Second, analysis of the Supreme Court's trial process cases reveals that the most liberal Justices, Brennan and Marshall, showed no greater tendency to rely on science than their conservative colleagues.<sup>126</sup> Third, even when the Justices wrote opinions specifically advocating changes in trial procedure, they did not rely on social science. Fourth, the hypothesis leads to the conclusion that social science will *never* be welcomed into the legal process. It therefore does not account for situations in which social scientists are allowed to play a major role in the law, for example, as expert witnesses.<sup>127</sup>

The conceit theory suggests that judges shun social science not out of distrust, but out of conceit. They conceive of law as an autonomous, self-contained discipline.<sup>128</sup> Judges may believe it unnecessary, and perhaps even inappropriate to consult anything but the law itself for answers to legal questions.<sup>129</sup> A good example of this attitude is Justice Felix Frankfurter's statement: "I do not care what any . . . professor in sociology tells me."<sup>130</sup> Although a theory based on the conceit of lawyers is tempting, it is, alas, a tautology. It fails to answer *why* judges think the law is self-contained and needs no assistance from social science.

The human nature theory holds that judges are human, and it is just human nature to be illogical and unscientific. Social psychologists have

124. P. ROSEN, *supra* note 33, at 199. Conversely, judges may view economic analysis as reliable because of political congeniality, see Collins, *The Use of Social Research in the Courts*, in KNOWLEDGE AND POLICY: THE UNCERTAIN CONNECTION 147 (L. Lynn ed. 1978), or have more faith in data gathered by government agencies such as the census bureau. See *Mississippi Univ. for Women v. Hogan*, 458 U.S. 718, 729 (1982) (accepting government statistical data).

125. See G. SCHUBERT, *THE JUDICIAL MIND REVISITED* (1974); see also Rowland, Songer & Carp, *Presidential Effects on Criminal Justice Policy in the Lower Federal Courts: The Reagan Judges*, 22 LAW & SOC'Y REV. 191, 196-97 (1988) (study of federal appellate decisions showed that in split decision criminal cases, Reagan appointees voted for the defendant at only a 14% rate, while Carter appointees voted for defendants at a 67% rate).

126. See *supra* notes 90-94 and accompanying text.

127. See *supra* notes 6-7 and accompanying text; see also Haney, *supra* note 120, at 153 (psychology is commonly used by lawyers to resolve disputes about the insanity defense and to help improve courtroom performance).

128. See Posner, *Essays Commemorating the One Hundredth Anniversary of the Harvard Law Review: The Decline of Law as an Autonomous Discipline: 1962-1987*, 100 HARV L. REV. 761, 762-66 (1987) (suggesting that this attitude is breaking down with respect to economics).

129. See M. SAKS & C. BARON, *supra* note 19, at 120; Tremper, *supra* note 113, at 272.

130. ARGUMENT 65 (L. Friedman ed. 1969), *quoted in* M. SAKS & C. BARON, *supra* note 19, at 13, 16. Frankfurter's attitude has been described as "if a proposition is true, I don't need sociologists to tell me that it is true." A. D'AMATO, R. METRAILER & S. WASBY, *DESEGREGATION FROM BROWN TO ALEXANDER: AN EXPLORATION OF SUPREME COURT STRATEGIES*, 73-74 (1977), *quoted in* M. SAKS & C. BARON, *supra* note 19, at 16.

demonstrated that people generally tend to undervalue social science data,<sup>131</sup> misunderstand and under-utilize statistics,<sup>132</sup> rely on anecdotes and emotion rather than empirical and scientific evidence when making important decisions<sup>133</sup> and persistently hold beliefs contrary to logic and mathematics.<sup>134</sup> Merton asserts that this under-utilization of science arises from the natural incompatibility between the scientific ethos and the sentiments essential to, and taught by, other social institutions<sup>135</sup> such as religion. Indeed, from Galileo's retraction of his *Dialogue on the Great World Systems* in 1633, to the present debates on teaching evolution and "creation-science," religion and science have stood in opposition.<sup>136</sup> Yet this thesis, too, is tautological. It merely recognizes that most individuals will reject scientific expertise when making some kinds of decisions. It is not helpful in understanding why judges think psychology is less reliable than their own beliefs about juror behavior.

The ignorance hypothesis holds that judges, despite a generally high level of education and intelligence, are inexperienced with, and do not understand empirical social science, especially its statistical language.<sup>137</sup> This ignorance makes it difficult for judges to distinguish between public opinion polls and empirical research on human behavior,<sup>138</sup> or between social science and social ideology.<sup>139</sup> In the case of psychology, the problem may be compounded by judges confusing experimental psychology with clinical psychology and psychiatry. An article written by Professor Samuel Fahr offers a good illustration of a lawyer's failure to distinguish these two fields. In the course of explaining why lawyers distrust *social scientists*, he illustrates one of his points by stating that no two *psychiatrists* can agree on a question of mental illness.<sup>140</sup> If judges think that all psychology is clinical, they will be unlikely to distinguish experimental method and probabilistic conclusions from clinical method and diagnostic guessing.<sup>141</sup>

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131. See Saks & Kidd, *supra* note 66, at 149.

132. See Thompson & Schumann, *supra* note 66.

133. See R. NISBETT & L. ROSS, *supra* note 66, at 55-56.

134. See Saks & Kidd, *supra* note 66, at 127-31. A common example is the gambler's fallacy that a coin is more likely to land head up on the next toss if it has landed tail up several times in a row, on the ground that such a result is overdue. See also Thompson & Schumann, *supra* note 66 (discussing more complicated fallacies).

135. R. MERTON, *supra* note 110, at 254-55.

136. See Gieryn, Bevins & Zehr, *supra* note 20, at 395.

137. M. SAKS & C. BARON, *supra* note 19, at 15, 44.

138. See M. SAKS & C. BARON, *supra* note 19, at 119.

139. See P. ROSEN, *supra* note 33, at 199.

140. Fahr, *supra* note 111, at 168; see also Miller & Barron, *The Supreme Court, the Adversary System, and the Flow of Information to the Justices: A Preliminary Inquiry*, 61 VA. L. REV. 1187 (1975), in which they, too, confuse science with psychiatry. They illustrate their claim that judges do not understand *social and behavioral science*, by quoting a statement by Judge Jerome Frank that judges are ill-equipped to deal with *psychiatry*. *Id.* at 1211.

141. See McCord, *Syndromes, Profiles and Other Mental Exotica: A New Approach to the Admissibility of Nontraditional Psychological Evidence in Criminal Cases*, 66 OR. L. REV. 19, 25 (1987).

The ignorance hypothesis is at best only a partial explanation. It does not explain why in some situations the Justices actually do accept and rely on social science. For example, they have been willing to learn and apply rudimentary economics to antitrust law,<sup>142</sup> and to incorporate sociology and statistical analysis into discrimination cases.<sup>143</sup> The theory also does not explain why the Court continues to exhibit the same apparent scientific ignorance in the fourth or fifth case in a series of cases involving the same scientific studies. For example, between 1985 and 1987, the Supreme Court decided four cases involving the issue of whether death-qualified juries were conviction-prone.<sup>144</sup> The Court did not demonstrate any greater appreciation for the empirical research on conviction-proneness in the final case than it had shown in the first. The Court not only decided every case contrary to the psychological studies, but by the final case in the series was not even discussing the social science data.<sup>145</sup> A similar pattern is visible in the series of cases on jury size. The Court's final opinion in that series was no more enlightened than the first.<sup>146</sup>

The threat theory argues that judges view science as a threat to their power and prestige. In the legal system, people with legal training have traditionally occupied the high status positions. If the law were to become dependent on science for answers to legal questions, the role of those with legal training would be diminished. Eventually, scientific techniques alien to lawyers might replace the familiar dialectic of law as the basis for decisions.<sup>147</sup> This specter would threaten the current distribution of power<sup>148</sup>

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142. See *Continental T.V. v. GTE Sylvania*, 433 U.S. 36, 54-58 (1977); see also Collins, *supra* note 124, at 147.

143. See, e.g., *Mississippi Univ. for Women*, 458 U.S. at 729 (incorporating statistics in deciding whether a nursing school discriminated against men); *Castaneda v. Partida*, 430 U.S. 482 (1976) (statistical analysis of whether the grand jury selection process discriminated against Hispanics); see also D. BALDUS & J. COLE, *STATISTICAL PROOF OF DISCRIMINATION* (1980) (general textbook on the uses of social science and statistics at all levels of litigation to establish discrimination).

144. See *Buchanan v. Kentucky*, 483 U.S. 402 (1987); *Gray v. Mississippi*, 481 U.S. 648 (1987); *Lockhart v. McCree*, 476 U.S. 162 (1986); *Wainwright v. Witt*, 469 U.S. 412, *cert. denied*, 470 U.S. 1039 (1985). The issue had first been raised in *Witherspoon v. Illinois*, 391 U.S. 510 (1968).

145. *Buchanan*, 483 U.S. 402 (1987).

146. The question of jury size and unanimity has been presented in several cases. *Burch v. Louisiana*, 441 U.S. 130 (1979); *Ballew v. Georgia*, 435 U.S. 223 (1978); *Colgrove v. Battin*, 413 U.S. 149 (1973); *Apodaca v. Oregon*, 406 U.S. 404 (1972); *Johnson v. Louisiana*, 406 U.S. 356 (1972); *Williams v. Florida*, 399 U.S. 78 (1970); see also M. SAKS & C. BARON, *supra* note 19, at 119 (Stuart Nagel's complaints that the Court seemed to learn nothing from the data).

147. See Loevinger, *Law and Science as Rival Systems*, 8 *JURIMETRICS J.* 63, 70 (1966); McCord, *supra* note 141, at 25 n.16.

148. See J. BRONOWSKI, *supra* note 119, at 55; R. MERTON, *supra* note 110, at 277-78. Studies of administrative agencies have found that agency lawyers and scientists constitute organizational interest groups, each jockeying to maximize their power and the authoritativeness of their expertise in agency decision-making. Stryker, *supra* note 19.

in which judges can take advantage of the malleability of legal reasoning to fashion decisions as they see fit.<sup>149</sup> Like the other theories, however, this one is unable to account for those situations in which the courts have based decisions on economics and social science.

Rival-systems theory holds that law and science are incompatible systems with fundamentally different logics.<sup>150</sup> Like people from different cultures, lawyers and social scientists may have such different professional values that they simply cannot communicate effectively with each other. Thomas Kuhn, for example, implies that science is rational, but that law is by nature irrational.<sup>151</sup> Others have argued that science focuses on generalities and law on the individual,<sup>152</sup> or that social science is passive but law is dynamic.<sup>153</sup> Steven Goldberg has described science as non-utilitarian and focused on goals, and law as utilitarian and focused on process.<sup>154</sup> Craig Haney provides the most detailed explication of the rival-systems theory. He sets up a series of contrasting characteristics that distinguish social sciences like psychology from law: (1) social science is innovative, while law resists innovation, (2) social science is based on data and observation, while law is based on precedent and hierarchy, (3) social science seeks an objective answer to problems, while law seeks an adversarial victory, (4) social science is descriptive, while law is prescriptive, (5) social science is nomothetic, while law is idiographic, (6) social science conclusions are probabilistic and tentative, while legal conclusions are irrevocable and must appear certain, (7) social science is proactive, while law is reactive, and (8) social science is abstract, while law deals with concrete issues.<sup>155</sup>

In this form, rival-systems theory assumes that all social sciences are alike and all areas of law are sufficiently similar that courts will always reject social science. Yet the reality is clearly otherwise. Although the psychology of juror behavior has been ignored by the courts, other fields of social science have found a place in other areas of the law, like labor law.<sup>156</sup>

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149. See Cahn, *supra* note 33, at 157-68; cf. Dworkin, *supra* note 33, at 4-5 (pointing out that judges will always have to exercise moral judgment).

150. See Loevinger, *supra* note 147, at 70.

151. T. KUHN, *supra* note 122, at 19. But see M. WEBER, *THE THEORY OF SOCIAL AND ECONOMIC ORGANIZATION* 328-39 (T. Parsons ed. 1947) (law is rational in the sense that it depends on rules and their application according to appropriate procedures, regardless of the ends served).

152. See Fahr, *supra* note 111, at 162-63.

153. See Collins, *supra* note 124, at 145; see also Haney, *supra* note 120, at 166-67 (the law is reactive, while psychology is proactive).

154. Goldberg, *The Reluctant Embrace: Law and Science in America*, 75 *Geo. L.J.* 1341, 1344-45 (1987). But cf. J. HABERMAS, *supra* note 2, at 81-85 (treating science and its utilitarian form, technology, as having the same impact on society and politics).

155. Haney, *supra* note 120, at 159-68. In my opinion, Haney is wrong about some of his descriptions of the law, at least with respect to the characteristics of trials.

156. See Ellsworth & Getman, *supra* note 31, at 610-20 (comparing labor law to criminal law); Stryker, *supra* note 19 (describing the role of social science in labor law from the original Brandeis brief in 1908 to economic justification of the National Labor Relations Act).

Rival-systems theory fails to recognize that different areas of law may reflect significantly different public policies, employ different procedures, be based on different logics and further different—even competing—goals.<sup>157</sup>

If we eschew trying to develop a single metatheory to explain all social science and all legal decision-making, rival-systems theory might become a more useful tool. It suggests that we examine which areas of law share values with fields of social science and which do not. It predicts that the less compatible the two systems are, the less likely it is that legal decision-makers will incorporate social science information into their decisions. The Court's failure to accord any role to psychology in its trial law decisions may be due to their fundamentally incompatible normative systems.

#### IV. THE INCOMPATIBILITY OF PSYCHOLOGY WITH THE SUPREME COURT'S JURISPRUDENCE OF TRIALS

Ronald Dworkin points out that empirical research can answer questions of causation but not of right and wrong.<sup>158</sup> For example, psychology can demonstrate that death-qualifying a jury will result in more convictions,<sup>159</sup> but cannot answer the policy question whether an increase in the conviction rate in capital cases is desirable or undesirable.<sup>160</sup> The comparative-normative approach proposed above suggests that the Supreme Court will perceive a branch of social science to be relevant to the formation of legal policy only if the science reflects some of the same values being advanced by the law. The more the two value systems converge, the more completely the Court's jurisprudence will incorporate social-scientific information. The more the values diverge, the greater will be the tendency of the Justices to reject the science. In the case of trial procedures, the Court has totally denied psychology any role in the formation of policy. This aversion suggests that the values the Court believes are important to proper trials are inimical to the value structure of psychology

##### A. *The Normative Structure of Psychology*

The basic normative structure of experimental psychology is generally conceded. Like other sciences, psychology's organizing principle is the

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157. For example, one of the goals of criminal law may be to imprison a greater number of criminals for longer periods of time, while one of the goals of tax law may be to reduce expenditures on the criminal justice system.

158. Dworkin, *supra* note 33, at 4-6.

159. See Lockhart Brief, *supra* note 17, at 3.

160. See P. ROSEN, *supra* note 33, at 225 (social science cannot answer questions of values).

pursuit of truth. In addition, psychology values universality, community, disinterestedness, skepticism and progressiveness.<sup>161</sup>

If there is a single dominant principle in empirical psychology, it is that the goal of the scientific enterprise is to learn the truth.<sup>162</sup> The scientific notion of truth has three distinctive characteristics. First, scientific truth is tentative. Knowledge claims in science are seldom final and undergo constant revision.<sup>163</sup> Truth is not established by a single experiment, but by replication, debate and competition among segments of the scientific community that lead eventually to consensus.<sup>164</sup> Second, scientific truth is verifiable, or at least falsifiable. Empirical evidence may confirm or disprove scientific theories and claims.<sup>165</sup> Third, scientific truth usually is probabilistic. Its conclusions are expressed in statistical probabilities.<sup>166</sup>

Science also values universality.<sup>167</sup> Research is in principle independent of national boundaries, and does not depend on the race, nationality, sex, religion or social class of the scientists. This universality frees science from many political restraints. Scientific research can neither be invalidated by political decree nor changed by governments.<sup>168</sup>

The third principle of science is that it is supposed to be communistic.<sup>169</sup> Scientific findings are, in theory, common property owned by no one and available to all. Scientific knowledge is advanced collectively, conflicts with the capitalist definition of technology as private property and is arrived at by consensus.

Science also values disinterestedness.<sup>170</sup> Science is concerned with the advancement of knowledge generally, regardless of whether any group, other

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161. Some other principles have been put forward as being fundamental to science, but their validity is dubious. Merton asserts that science is politically neutral. Compare R. MERTON, *supra* note 110, at 270-73 with T. KUHN, *supra* note 122, at 23-34 (normal science reflects paradigms consistent with the status quo). Bronowski argues that scientists are virtuous, and do not make wild claims, cheat, try to persuade at any cost, hide their ignorance or discriminate based on race, sex or where one attended graduate school. J. BRONOWSKI, *supra* note 119, at 59. Collins says that social science is passive (merely observes) rather than actively trying to solve problems. Collins, *supra* note 124, at 145.

162. *But cf.* T. KUHN, *supra* note 122, at 5-24 (arguing that most scientists do not seek truth, but seek to verify the accepted scientific paradigms of their disciplines—to force nature into conceptual boxes supplied by prevailing theories).

163. J. BRONOWSKI, *supra* note 119, at 37, 45, 63; Gieryn, Bevins & Zehr, *supra* note 20, at 396-97; Haney, *supra* note 120, at 165-66, 184.

164. T. KUHN, *supra* note 122, at 8.

165. Gieryn, Bevins & Zehr, *supra* note 20, at 400; see Goldberg, *supra* note 154, at 1345-46.

166. Haney, *supra* note 120, at 165-66.

167. R. MERTON, *supra* note 110, at 270-73.

168. *Cf.* T. KUHN, *supra* note 122, at 5 (pointing out that universalism does not mean that science is nonpolitical and value-neutral; science reflects the status quo as learned in graduate school); see also Fineman & Opie, *supra* note 32, at 110-11 (much research arises from and incorporates the political positions of the social scientists who undertake it).

169. R. MERTON, *supra* note 110, at 273-75.

170. *Id.* at 275-77 Merton asserts that science is disinterested, but obviously means it strives for disinterestedness.

than science itself, benefits from it. Although individual scientists may be motivated by personal interests in fame, fortune, funding or politics,<sup>171</sup> these interests are largely filtered out by institutionalized procedures that reasonably assure objectivity and unbiased interpretation of data.<sup>172</sup>

The scientific method of hypothesis testing reflects the value science places on skepticism.<sup>173</sup> Social scientists are skeptical of the assumptions underlying social institutions. They ask questions of fact concerning society and human behavior when other social institutions have already ritualized certain answers that may or may not be empirically valid. Social science, therefore, threatens the current distribution of power.<sup>174</sup>

Finally, social science values innovation and progress. Psychology is progressive in the sense that it is never satisfied with the current state of understanding about human behavior. Psychology is therefore associated with change, rather than preservation of the status quo.<sup>175</sup>

### B. *The Normative Structure of Trials*

There is considerably less agreement on the basic norms of the trial system. A few writers have suggested that trials serve only one purpose—to determine the truth about a dispute.<sup>176</sup> However, this simplistic notion cannot survive serious scrutiny. Scholars who study the American trial system describe a far more complex normative structure comprising some or all of five conflicting values: “adversariness,” institutional efficiency, legal accuracy, social symbolism and preservation of order.

The basic organizing principle of the trial system is its adversarial structure. There are lawyers on each side of a case, who are charged, not with assisting in the determination of truth, but with advancing their clients’ individual interests, regardless of the merits.<sup>177</sup> While many have criticized this “sporting contest” approach,<sup>178</sup> no one disagrees that it is the predominant characteristic of American trials.<sup>179</sup>

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171. See T. KUHN, *supra* note 122.

172. Gieryn, Bevins & Zehr, *supra* note 20, at 403.

173. R. MERTON, *supra* note 110, at 277-78.

174. J. BRONOWSKI, *supra* note 119, at 55, 60-61; cf. T. KUHN, *supra* note 122, at 24, 36 (arguing persuasively that most scientists are not very skeptical, but practice “normal” science, which consists of solving small puzzles within the currently accepted scientific paradigms, and do not often challenge prevailing theories).

175. Gieryn, Bevins & Zehr, *supra* note 20, at 397; Haney, *supra* note 120, at 159.

176. See, e.g., Meese, *Promoting Truth in the Courtroom*, 40 VAND. L. REV. 271 (1987); Weinstein, *Some Difficulties in Devising Rules for Determining Truth in Judicial Trials*, 66 COLUM. L. REV. 223 (1966).

177. See Belsky, *The Retaliation Doctrine: Promoting Forensic Misconduct*, 50 ALB. L. REV. 763, 767 (1986).

178. See M. FRANKEL, *PARTISAN JUSTICE* 11-12 (1980); Gerber, *Victory vs. Truth: The Adversary System and Its Ethics*, 19 ARIZ. ST. L.J. 3, 4 (1987); Williams, *Advance Notice of the Defence*, 1959 CRIM. L. REV. 548, 554.

179. See Goodpaster, *On the Theory of American Adversary Criminal Trial*, 78 J. CRIM. L. & CRIMINOLOGY 118 (1987); Weinstein, *supra* note 176, at 225.



The Supreme Court's trial decisions are rife with evidence of the value placed on preserving adversariness. In *Strickland v Washington*, Justice O'Connor stated that "a fair trial is one in which evidence subject to adversarial testing is presented to an impartial tribunal for resolution."<sup>180</sup> In *United States v Havens*, the Court said that it is "essential . . . to the proper functioning of the adversary system that [the state] be permitted proper and effective cross-examination."<sup>181</sup> In *Ohio v Roberts*, Justice Blackmun stated his belief that adversarial confrontation between accuser and accused is "so important" that it is essential to the "ultimate integrity" of the trial process.<sup>182</sup> In *United States v. Young*, the Court even used a sporting contest metaphor: "[T]he adversary system permits . . . hard blows [but not] foul ones . . . [I]n the heat of argument hard blows cannot be avoided [although this is] not intended by any means to encourage the practice of zealous counsel's going 'out of bounds.'"<sup>183</sup>

The adversarial emphasis is sometimes defended on the ground that adversarial procedures will somehow result in the discovery of truth,<sup>184</sup> but most scholars point out that this is mere wishful thinking at best.<sup>185</sup> The adversarial system in fact encourages lawyers to conceal and suppress damaging information, to exaggerate the significance of favorable evidence and to try to deceive the jury about the importance of facts or the way the law works.<sup>186</sup> This clearly conflicts with scientific method, but to the Court, adversariness is paramount. Thus, the Court may reject empirical research that has not been "subjected to the traditional testing mechanism of the adversary process,"<sup>187</sup> or denigrate scientific consensus with the remark that if scientific knowledge were *really* correct, then it would prevail in the adversary system.<sup>188</sup>

The second important trial norm is institutional efficiency. Trial resources are limited and many litigants want access to them. Therefore, the legal system must allocate those resources efficiently among disputants.<sup>189</sup> Policies

180. 466 U.S. 668, 685 (1984).

181. 446 U.S. 620, 626-27 (1980).

182. 448 U.S. 56, 63-64 (1980).

183. 470 U.S. 1, 7-13 (1985).

184. *E.g.*, Fuller & Randall, *Professional Responsibility: Report of the Joint Conference*, 44 A.B.A. J. 1159, 1160 (1958); Goldberg, *supra* note 154, at 1349.

185. *See* Goodpaster, *supra* note 179, at 121-24; Gross, *The American Advantage: The Value of Inefficient Litigation*, 85 MICH. L. REV. 734, 742-44 (1987); *see also* Lind, *The Psychology of Courtroom Procedure*, in *THE PSYCHOLOGY OF THE COURTROOM*, *supra* note 5, at 21-22 (summarizing empirical evidence and concluding that the adversarial structure does not lead to reliable, accurate verdicts).

186. *See* Gold, *Covert Advocacy: Reflections on the Use of Psychological Persuasion Techniques in the Courtroom*, 65 N.C.L. REV. 481, 483-86 (1987).

187. *Ballew v. Georgia*, 435 U.S. 223, 246 (1978) (Powell, J., concurring) (presumably referring to the lack of opportunity for lawyers to cross-examine the scientists).

188. *Barefoot v. Estelle*, 463 U.S. 880, 900-01 (1983).

189. Arenella, *Rethinking the Functions of Criminal Procedure: The Warren and Burger*

that favor finality and limit appeals and retrials advance this objective.<sup>190</sup> In addition, maintenance of a hierarchical system among judges, in which discretion is granted to lower court judges and the power of appellate judges to intervene is limited, aids efficiency.<sup>191</sup> Efficiency concerns are of growing significance in Supreme Court trial law decisions.<sup>192</sup> For example, in *Engle v. Isaac*<sup>193</sup> and *United States v. Frady*,<sup>194</sup> companion cases raising claims of improper trial procedures, Justice O'Connor's majority opinions make sixteen references to the need for efficiency,<sup>195</sup> compared to two references to the need for accurate, reliable results.<sup>196</sup> In *Morris v. Slappy*, the Court rejected a claim that a defendant's lawyer should have been given more time to prepare, justifying the decision by referring to the importance of trial schedules, the convenience of witnesses and the importance of the

*Courts' Competing Ideologies*, 72 GEO. L.J. 185, 199-200 (1983). It also could be argued that because of the disparity of resources between parties, trials must be reasonably efficient so they remain affordable to the average disputant. This seems a dubious proposition at best. Gross argues that it is not only dubious, but socially counterproductive, because efficient individual trials may not be accurate, and inefficiency deters needless litigation and promotes settlement. Gross, *supra* note 185, at 740, 748-56.

190. See Pulaski, *Criminal Trials: A "Search for Truth" or Something Else?*, 16 CRIM. L. BULL. 41, 41-42 (1980).

191. See Christie, *An Essay on Discretion*, 1986 DUKE L.J. 747, 750-64; Rosenberg, *Judicial Discretion of the Trial Court, Viewed from Above*, 22 SYRACUSE L. REV. 635, 660-65 (1971).

192. At least the rhetoric of efficiency is increasing. In criminal cases that reach the Supreme Court, it is always more efficient to uphold a conviction rather than award a new trial. It is therefore difficult to distinguish genuine concern for efficiency from general anti-defendant bias. There is some reason to believe that efficiency is being touted merely to legitimize conservative anti-defendant decisions. See *Lockhart v. McCree*, 476 U.S. 162, 180-81 (1986) (one reason given for approving the use of conviction-prone juries was the inefficiency of presenting evidence twice to two juries; the Court ignored the fact that the two juries could have sat together, so that evidence would only have to be presented once). There is also evidence that the Justices' desire for efficiency is genuine. See *Jenkins v. Anderson*, 447 U.S. 231, 234 n.1 (1980) (holding that the state was barred from asserting a claim on appeal because of a procedural default).

193. 456 U.S. 107 (1982).

194. 456 U.S. 152 (1982).

195. *Engle*, 456 U.S. at 126-29, 134 ("The writ of habeas corpus entails significant costs [and] extends the ordeal [of a criminal trial for] society [S]ociety [has] an interest in the certainty that comes with an end to litigation [T]he writ undermines the usual principles of finality [S]ociety's resources [should be concentrated] at one time and place in order to decide guilt or innocence. [The] passage of time may render retrial difficult, even impossible. [T]he Great Writ imposes special costs on our federal system [which are] particularly high when a trial default has [occurred]. [A] habeas writ . . . exacts an extra charge . . . The costs do not depend upon the type of claim . . . [T]he demand of comity and finality counsel against [habeas]."); *Frady*, 456 U.S. at 163-66 (1982) ("[A]ll trial participants [must] seek a fair and accurate trial the first time around . . . [S]ociety [has a] legitimate interest in the finality of the judgment [and cannot allow] a series of endless postconviction collateral attacks [A] final judgment commands respect . . . [T]he Federal Government has an interest in the finality of its criminal judgments.").

196. *Engle*, 456 U.S. at 129 ("truthfinding"); *Frady*, 456 U.S. at 163 ("fair and accurate trial").

prompt administration of justice.<sup>197</sup> Similarly, in *United States v Valenzuela-Bernal*, the Court approved the government's deporting eyewitnesses just before trial, justifying depriving the defendant of evidence on the grounds that detaining illegal aliens would impose financial and physical burdens on the government.<sup>198</sup> The Court has also justified the use of biased juries in capital cases because of the trial court's difficult job and heavy workload, the inefficiency of conducting two trials, the need to save time and the burdens placed on the system by defendants who appeal.<sup>199</sup>

The principle of efficiency is not very important to psychological research.<sup>200</sup> Psychologists are not expected to arrive at an irrevocable conclusion after only a single experiment. The results of individual experiments are not accorded a presumption of finality, but are always open to challenge and invalidation. In psychology, review, duplication and replication of experiments are an integral part of the process of reaching conclusions.

The Supreme Court sometimes rejects psychological research in the name of efficiency.<sup>201</sup> In *Lockhart v McCree*, the Court rejected the empirical research on the conviction-proneness of death-qualified juries because correcting the problem would require the inefficient use of two juries or repetitive trials.<sup>202</sup> Research demonstrating that jurors might be unable to follow instructions on disregarding improper evidence has likewise been rejected<sup>203</sup> because ordering new trials after every instance of improper use of evidence would overwhelm the system.

The third jurisprudential value of trials is legal accuracy, often simplistically referred to as "truth."<sup>204</sup> The Supreme Court has written that "the normally predominant principle [is that] of utilizing all rational means for ascertaining truth";<sup>205</sup> the law's mission is to "advance the accuracy of the

197 *Morris v. Slappy*, 461 U.S. 1, 11, 14-15 (1983). Chief Justice Burger wrote: "Trial judges necessarily require a great deal of latitude in scheduling trials[,] assembling the witnesses, lawyers, and jurors at the same place and [at the same] time repeated trials [place] burdens on the system in terms of witnesses, records, and judicial resources." See also *United States v. Hastings*, 461 U.S. 499, 507 (1983) (expressing similar concerns).

198. *United States v. Valenzuela-Bernal*, 458 U.S. 858, 865 (1982).

199. See *Lockhart*, 476 U.S. at 180-81.

200. Obviously, individual psychologists have to conduct their experiments with some degree of efficiency if they are to obtain grants and satisfy publication requirements for promotion and tenure. Other psychologists no doubt are efficient by nature. However, psychology as a discipline is not obsessed with efficiency as an end in itself.

201. The Court's stated preference to submit accepted scientific conclusions to pointless adversarial testing is, of course, grossly inefficient. See Walker & Monahan, *supra* note 7, at 588-98. However, it is not uncommon for the Court to have to choose between conflicting values.

202. *Lockhart*, 476 U.S. at 175-76, 180-81.

203. *Carter v. Kentucky*, 450 U.S. 288, 303 (1981).

204. Leonard, *The Use of Character to Prove Conduct: Rationality and Catharsis in the Law of Evidence*, 58 U. COLO. L. REV. 1, 2-5 (1986); Saks & Kidd, *supra* note 66, at 123-25.

205. *Trammel v. United States*, 445 U.S. 40, 50 (1980).

truth-determining process in criminal trials";<sup>206</sup> "arriving at the truth is a fundamental goal of our legal system";<sup>207</sup> trials are a "'truth-determining process";<sup>208</sup> and the law should "augment accuracy in the fact-finding process."<sup>209</sup> The Court has referred to the need for full disclosure of evidence as grounds for limiting testimonial privileges, calling such privileges indefensible obstructions to the truth.<sup>210</sup> Recently, even the scope of constitutionally based exclusionary rules has been restricted in the name of eliciting the truth.<sup>211</sup>

The problem with using the word "truth" in the trial context is that it is latently ambiguous. What actually happened in the past is not empirically discoverable through the use of fallible witnesses under procedural rules that may exclude relevant testimony.<sup>212</sup> Juries are not asked to determine purely factual issues, rather they must apply facts to law and make judgments about culpability.<sup>213</sup> And, juries must reach legally binding decisions even if they have no idea what really happened because the evidence is weak, contradictory or confusing. With all of these constraints, the best the system can hope for is that trials will result in an approximation of factual truth.<sup>214</sup> In other words, trials are concerned with *proof*—whether the parties can satisfy the rules of a closed system—and not with whether juries can determine the actual truth.<sup>215</sup> Therefore, it is more precise to say that the trial system values legally accurate verdicts than that it values truth.

206. *Tennessee v. Street*, 471 U.S. 409, 415 (1985).

207. *United States v. Havens*, 446 U.S. 620, 626 (1980).

208. *United States v. Inadi*, 475 U.S. 387, 396 (1986) (quoting *Street*, 471 U.S. at 415).

209. *Ohio v. Roberts*, 448 U.S. 56, 65 (1980); cf. *Frady*, 456 U.S. at 163 (Justice O'Connor asserts that accuracy is important because it is more efficient than having to try the case a second time).

210. *Trammel*, 445 U.S. at 52.

211. *Havens*, 446 U.S. at 626-27; *Jenkins v. Anderson*, 447 U.S. 231, 238 (1980). Whether the Court takes its own rhetoric seriously or just uses it to legitimate its decisions is a matter of debate. In virtually every instance where the Court emphasizes the need for full evidence in order to promote truth-seeking and accurate verdicts, its ruling permits evidence to be introduced that will help *convict* the defendant. Therefore, it is difficult to distinguish truth-seeking from anti-defendant bias in many cases. For example, the Supreme Court has eliminated several testimonial privileges so that witnesses could testify *against an accused* defendant in the name of truth-seeking, see, e.g., *Trammel*, 445 U.S. 40; *United States v. Gillock*, 445 U.S. 360 (1980), but in the one case presenting a privilege that favored corporate interests, it was *expanded*, without mention of the need to determine truth. *Upjohn Co. v. United States*, 449 U.S. 383 (1981).

212. Loh, *supra* note 122, at 16-18; see Leonard, *supra* note 204, at 25-31 (analyzing rules of character evidence and concluding they do not advance truth-seeking). Nevertheless, one of the pervasive myths of the trial system is that the rules of evidence are designed primarily to aid the reliability of the jury's verdict by protecting jurors from evidence that might distract them or prejudice one of the parties. Even some legal scholars still cling to this notion. See Landsman, *A Brief Survey of the Development of the Adversary System*, 44 OHIO ST. L.J. 713, 716 (1983).

213. See Arenella, *supra* note 189, at 197-99.

214. See M. FRANKEL, *supra* note 178, at 73; Weinstein, *supra* note 176, at 229.

215. See M. SAKS & C. BARON, *supra* note 19, at 45.

Although the trial's goal of legal accuracy and psychology's search for empirical accuracy are similar concepts, they are not interchangeable. First, scientific method requires that complete data be gathered,<sup>216</sup> and that all data be accounted for. Trials, on the other hand, rely on incomplete data gathered by biased investigators, operate according to procedural rules that exclude entire categories of information and permit juries to disregard what little evidence is introduced. Second, erroneous conclusions by scientists probably will be exposed by subsequent research. Erroneous decisions by juries cannot be detected because no further investigation and research is permitted. The only review of a jury's decision is limited to whether the factual conclusions are supported by *some* evidence, and whether the decision was arrived at through a correct understanding of the law. Third, the conclusions reached in trials are individualistic and need not be consistent, while those reached by psychology are probabilistic and general, based on consistent results from several experiments.<sup>217</sup> Thus, the scientific paradigm envisions a single truth discovered after several experiments, and subject to later revision. The litigation paradigm *hopes* that the facts will point to a single truth, but recognizes that often the jury may justifiably reach any one of several decisions, none of which is subject to revision.<sup>218</sup>

The fourth element of the normative structure of trials is social symbolism. The trial system is one of the most visible American legal institutions. Thus, it is important that trials reinforce aspects of prevailing ideology. Trials are said to symbolize the importance of individual autonomy<sup>219</sup> and government respect for individual rights.<sup>220</sup> The prominence of the jury is often said to

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216. In many instances, complete data on human behavior cannot be gathered, in which case a smaller sample may be used, as long as it can be demonstrated that the sample is representative of the universe of subjects. The quintessential characteristic of a valid sampling technique is that it must not be biased.

217. For example, if psychologists demonstrate that 99 out of 100 death-qualified juries will be conviction-prone, the lawyers in any capital case can argue that theirs is the one exception. See *Lockhart*, 476 U.S. at 171-72 (Chief Justice Rehnquist argues that social science can be ignored because it cannot tell us with certainty what the jury's verdict would be in any particular case); see also Stryker, *supra* note 19, for further discussion of the difference between scientific and legal rationality.

218. A good example is the Texas case involving Lionell Geter, mistakenly identified as a robber. Even after the case was profiled on the CBS program *Sixty Minutes*, and it was apparent that Geter had been mistakenly identified and was factually innocent, he remained in jail. The state had presented its proof at trial, the defendant had presented his alibi witnesses and the jury had sided with the state. Therefore, a *legally correct*, but factually wrong, verdict, supported by evidence and decided by law, had been reached. Because the verdict was legally proper, it was very difficult to undo. Geter was held in prison for almost *two years* after his true innocence was known. The case is summarized in L. WRIGHTSMAN, *supra* note 23, at 103-04.

219. See Arenella, *supra* note 189, at 197-99. But see Gross, *supra* note 185, at 744-47 (expressing doubts that the adversarial structure symbolizes individual autonomy).

220. See Terrell, *Rights and Wrongs in the Rush to Repose: On the Jurisprudential Dangers of Alternative Dispute Resolution*, 36 EMORY L.J. 541, 545-46 (1987).

symbolize democratic ideals.<sup>221</sup> In the jury size cases, for example, the Supreme Court discusses the symbolic importance of the jury as the democratic bulwark against government oppression.<sup>222</sup> In other cases, the Justices mention the contemporary symbolic importance of including blacks,<sup>223</sup> Mexican-Americans<sup>224</sup> and women<sup>225</sup> in jury service. Trials also serve to reinforce social and moral norms concerning appropriate behavior and to define the boundaries of acceptable conduct.<sup>226</sup>

The fact that trials function symbolically to reinforce existing social institutions may conflict with social science's skepticism about the premises upon which those institutions are based. Stuart Nagel once expressed disappointment that the Court only selectively used his data on the effect of reducing jury size.<sup>227</sup> He assumed the Justices did not understand his research. A more likely explanation is that the data were irrelevant. Nagel was researching what effect jury size had on the quality of the verdict, while the Court was concerned with the symbolism of using smaller juries.<sup>228</sup>

Finally, the trial system plays an important role in the preservation of social order, primarily by serving a crime control function.<sup>229</sup> Trials provide an apparently neutral way to legitimate the state's exercise of power over its citizens and its claim of a monopoly over physical violence.<sup>230</sup> To serve these functions, trials must appear to be a viable method for resolving conflicts so that citizens will bring their disputes to the legal system rather than settle them in the streets. Trials must therefore appear to be fair.<sup>231</sup> Giving interested parties their day in court is cathartic and limits the number of times people take the law into their own hands.<sup>232</sup> Judge Jack Weinstein calls this "tranquilizing disputants."<sup>233</sup>

221. Gold, *supra* note 186, at 498-500.

222. See, e.g., *Johnson v. Louisiana*, 406 U.S. 356, 373-74 (1972); *Williams v. Florida*, 399 U.S. 78, 100 (1970).

223. *Batson v. Kentucky*, 476 U.S. 79, 98-99 (1986) (racial discrimination harms society).

224. *Hernandez v. Texas*, 347 U.S. 475, 478 n.4 (1954) (ancestry distinctions odious to free people whose institutions are founded on the doctrine of equality).

225. *Taylor v. Louisiana*, 419 U.S. 522, 527-33 (1975) (a jury excluding women is at war with the basic concepts of democratic society).

226. See Arenella, *supra* note 189, at 197-99; Nesson, *The Evidence or the Event? On Judicial Proof and the Acceptability of Verdicts*, 98 HARV. L. REV. 1357, 1360 (1985); see also W. HURST, *LAW AND SOCIAL ORDER IN THE UNITED STATES* 215-23 (1977) (criticizing law generally for failing in this regard by excluding some groups from the process, being susceptible to influence by moneyed and other interest groups and for fostering a good deal of injustice).

227. M. SAKS & C. BARON, *supra* note 19, at 106-07 (citing Weinstein, *Some Difficulties in Devising Rules for Determining Truth in Judicial Trials*, 66 COLUM. L. REV. 223, 233 (1966)).

228. See, e.g., *Williams*, 399 U.S. at 100.

229. See Belsky, *supra* note 177, at 772; Seidman, *Factual Guilt and the Burger Court: An Examination of Continuity and Change in Criminal Procedure*, 80 COLUM. L. REV. 436, 437-38 (1980).

230. See Arenella, *supra* note 189, at 200-08.

231. See Bandes, *Taking Some Rights Too Seriously: The State's Right to a Fair Trial*, 60 S. CAL. L. REV. 1019, 1032-33 (1987).

232. See Leonard, *supra* note 204, at 2-3.

233. See Weinstein, *supra* note 176, at 241.

The Court rarely is explicit about the role of the trial system in the preservation of social order. The Justices do assert sometimes that rules excluding incriminating evidence are bad because they generate disrespect for law and the administration of justice.<sup>234</sup> The Court's opinions also repeatedly emphasize that some interests of the state deserve consideration equal to, or greater than, that afforded to litigants. Thus, the Court accords considerable weight to the state's interests in prosecuting its laws,<sup>235</sup> punishing transgressors<sup>236</sup> and even deporting illegal immigrants.<sup>237</sup> Social science, with its tradition of progressiveness and skepticism about social institutions and the power of the state, may occasionally find itself at odds with the Court's desire to preserve the current social order.

The best known example of the Court's concern with the preservation of order is its series of death-penalty cases. In capital cases, the Court has repeatedly stated its willingness to tolerate conviction-prone juries because of the importance of the state's interest in prosecuting its criminal laws.<sup>238</sup> It seems fairly clear from the cases that the Court believes the death penalty is an important instrument of social control, functioning to deter crime and reassure the citizenry that the state is doing something to protect it from violence. Most of the Justices probably believe that using death-qualified, conviction-prone juries facilitates these ends and therefore should be allowed.

### CONCLUSION

Much modern theory about the relationship between social science and law suggests that courts should accord psychology a significant place in the jurisprudence of trials, because science is culturally prominent,<sup>239</sup> or can help legitimate political decisions.<sup>240</sup> Yet, the Supreme Court has consistently refused to rely on empirical research about jury behavior when deciding issues of proper trial procedure. It is not that the Court is completely unscientific. The Justices are willing to rely on economics and sociology when making decisions in other areas of law. Nor is psychology totally banished from the trial system—psychologists are used frequently as expert witnesses, and lawyers rely on psychological research on jury behavior to

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234. *E.g.*, *United States v. Leon*, 468 U.S. 897, 907-08 (1984).

235. *Wainwright v. Witt*, 469 U.S. 412, 423 (1985); *Gillock*, 445 U.S. at 373.

236. *See, e.g.*, *Hasting*, 461 U.S. at 509; *Engle*, 456 U.S. at 128.

237. *United States v. Valenzuela-Bernal*, 458 U.S. at 872-73.

238. *Lockhart*, 476 U.S. at 175-76, 180-81; *Wainwright*, 469 U.S. at 423.

239. *See* R. MERTON, *supra* note 110, at 267

240. *See* J. HABERMAS, *supra* note 2, at 100-05 (government intervention undermines the ideology of the free market; science and its appearance of objectivity legitimates nondemocratic decisions).

help them plan trial strategy. Therefore, the Court's aversion to empirical psychological research in its jurisprudence of trials poses a puzzle. It suggests that there are limits to the role of social science in modern jurisprudence.

Several possible explanations for the rejection of psychological research can be eliminated. Psychology is not omitted because it is unavailable to lawyers. Relevant research has been published in law journals, incorporated in law school textbooks and brought to the Court's attention in briefs. Nor is psychology rejected because its answers are always qualified or inconclusive. The research on many issues faced by the Court indicates a clear consensus among psychologists. Other explanations for the rejection of psychology—fear that scientists will usurp power, political disjunction between liberal psychologists and conservative judges, the conceit of lawyers, the unscientific nature of human reasoning, judges' lack of training and experience in social science and the incompatibility of the two systems of logic—are incomplete. They do not recognize that the Court sometimes does, and sometimes does not, incorporate social science into its legal policy-making.

This Article suggests that for a body of empirical research to command a place in jurisprudence, the science must reflect some of the same values as a particular body of law. The more the two value systems converge, the more completely will law accept the science. The more the normative structures diverge, the greater will be the tendency of judges to reject the science.

The Supreme Court has completely ignored the empirical research on jury behavior because the scientific norms of psychology are fundamentally incompatible with the Court's jurisprudence of trials. To the Supreme Court, a proper trial must accommodate five different important principles: (1) preserving the adversary structure, (2) promoting institutional efficiency, (3) facilitating legally accurate verdicts, (4) symbolizing important aspects of social ideology and (5) preserving social order. None of those principles is important to psychological research. The science of psychology values factual truth, universalism, communism, disinterestedness, skepticism and progressiveness.

Thus, for example, even though empirical research shows that death-qualified juries are conviction-prone and may not return accurate verdicts, such research has been rejected by a Supreme Court that believes the death penalty is an important element of social control. Even though research on jury size demonstrates that small juries are less reliable than large ones, the research has been irrelevant to a Court concerned primarily with the symbolic importance of the jury. Even though research demonstrates that juries do not follow instructions to disregard improper evidence, the research has had little impact on the Court because efficiency favors jury instructions instead of retrials.



The only common ground for psychology and the jurisprudence of trials would seem to be their mutual pursuit of truth. However, the two systems seek and define truth quite differently. Scientific truth emerges from a consideration of all data. Legal truth emerges from a rule-bound process that excludes much information. Science is concerned with whether its results are empirically verifiable. Law is concerned that the results of trials be legally accurate. Scientific truth is general, probabilistic and arrived at over time. Legal truth is individualistic, may be improbable and must be determined immediately.

This analysis suggests that there is a fundamental incompatibility between psychology and the Supreme Court's jurisprudence of trials. Their radically different normative systems make communication between the disciplines very difficult. The resulting intellectual chasm may explain why the Court has so completely resisted scientizing its jurisprudence of trials. The Justices simply cannot understand what the psychologists are saying.

## APPENDIX I

## CASES REFERRING TO PSYCHOLOGICAL LITERATURE

Case	Decision Consistent or Inconsistent with, or Contrary to Science	Issue	Citations to Psychological Literature	Use of Science in Decision
Colgrove v. Battin, 413 U.S. 149 (1973)	Inconsistent	Jury size in civil cases	Majority and dissenting opinions cite some literature in footnotes. <sup>1</sup>	Majority acknowledges but ignores research; dissent states science is irrelevant to legal decision. <sup>2</sup>
Ballew v. Georgia, 435 U.S. 223 (1978)	Partially Consistent	Jury size: 5-person jury	Jury size research (e.g., Saks, Davis, Friedman) discussed in briefs and majority opinion. <sup>3</sup>	Majority opinion uses it; dissenting opinion criticizes majority's reliance on it. <sup>4</sup>
Watkins v. Sowders, 449 U.S. 341 (1981)	Inconsistent	Whether jurors can assess reliability of eyewitness testimony	Dissent discusses research on how jurors evaluate eyewitness testimony. <sup>5</sup>	Majority opinion ignores research and does not acknowledge it, bases the decision on two premises contrary to it. <sup>6</sup>
Carter v. Kentucky, 450 U.S. 288 (1981)	Consistent	Whether jury will follow instructions (minor issue)	Majority opinion cites two empirical studies in footnote. <sup>7</sup>	Majority opinion cites but does not rely on science. <sup>8</sup>

1. *Colgrove*, 413 U.S. at 158 n.13, 159-60 n.15 (majority opinion); *id.* at 167 n.1 (dissenting opinion).

2. *Id.* at 159 (majority opinion); *id.* at 167 n.1 (dissenting opinion).

3. *Ballew*, 435 U.S. at 231-39 nn.10-33, 242-43 n.34; Brief for Petitioner at 7, 8, 9; Brief for Respondent in opposition to Petition for Writ of Certiorari, at 7.

4. *Ballew*, 435 U.S. at 232, 239, 242 (majority opinion); *id.* at 246 (dissenting opinion).

5. *Watkins*, 449 U.S. at 350 n.1, 352-53 nn.3-5, 353, 357.

6. *Id.* at 347-48.

7. *Carter*, 450 U.S. at 302-03 n.20.

8. *Id.*

Barefoot v Estelle, 463 U.S. 880 (1983)	Contrary	Psychiatric predictions of dangerousness	Medical and clinical psychological research showing unreliability of behavior predictions discussed in briefs, dissenting opinion, and acknowledged in majority opinion. <sup>9</sup>	Majority rejects and misuses science, reaches opposite conclusion; dissent relies on it. <sup>10</sup>
Wainwright v Witt, 469 U.S. 412 (1985)	Inconsistent	Death-qualification of jury	Dissent cites numerous conviction-proneness studies (e.g., Gross, Cowan, Haney). <sup>11</sup>	Majority ignores and does not cite science; reaches opposite conclusions. <sup>12</sup>
Lockhart v McCree, 476 U.S. 162 (1986)	Contrary	Use of death-qualified jury to decide guilt	Briefs (including one by the APA) contain extensive discussion of conviction-proneness research; Court discusses data in its opinion. <sup>13</sup>	Majority criticizes research, then assumes it to be accurate; dissent summarizes research. <sup>14</sup>
Holbrook v Flynn, 475 U.S. 560 (1986)	Contrary	Effect on jurors of presence of security force	One study cited (Fontaine) in brief, and by Court in footnote. <sup>15</sup>	Study ignored because its results were inconsistent with intuition. <sup>16</sup>

9. *Barefoot*, 463 U.S. at 899-901 (majority opinion); *id.* at 920-24 nn.2-6, 932 n.11, 936 n.14; Brief for Petitioner at 13, 14, 17; Brief for Respondent at 21, 22, 24 n.9, 44, 45, 46, n.10; Brief for amicus curiae NAACP Legal Defense and Educational Fund, Inc. at 51; Brief for amicus curiae American Psychological Association at 12-15 nn.7-9.

10. *Barefoot*, 463 U.S. at 899-901 (majority opinion); *id.* at 920-24 (dissenting opinion).

11. *Wainwright*, 469 U.S. at 460 n.11.

12. *Id.* at 412.

13. *Lockhart*, 476 U.S. at 167-68, 169-70 nn.4-6, 170-71, 172 nn.12-13; Brief for Respondent at App. 94-108 nn.1-20; Brief for amicus curiae Patrick W. Peters, Jackson County Prosecutor's Office, Kansas City, Mo. and Robert Pepper, Dean of University of Missouri at Kansas City School of Law at 13, 17 n.5; and Brief for amicus curiae American Psychological Association at 6 nn.4, 7, 9, 13, 14, 16, 21 n.26.

14. *Lockhart*, 476 U.S. at 170-73 (majority criticizes); *id.* at 173 (majority assumes accuracy); *id.* at 187 nn.2-3 (dissent's summary of the research).

15. *Holbrook*, 475 U.S. at 571 n.4; Brief for Respondent at 43 n.55.

16. *Holbrook*, 475 U.S. at 571 n.4.

Gray v. Mississippi, 481 U.S. 648 (1987)	Consistent	Effect of removing jurors who oppose death penalty	One study (Cowan) cited in brief. <sup>17</sup>	Study ignored; no science discussed or cited. <sup>18</sup>
Rock v. Arkansas, 483 U.S. 44 (1987)	Inconsistent	Use of hypnotically-enhanced testimony	Brief discusses research on effects of hypnosis ( <i>e.g.</i> , Orne); Court cites same literature. <sup>19</sup>	Court views research as essentially irrelevant to deciding matter of legal policy. <sup>20</sup>
Buchanan v. Kentucky, 483 U.S. 402 (1987)	Contrary	Use of death-qualified jury for defendant not subject to death penalty	Research on conviction-proneness of death-qualified jury discussed in briefs ( <i>e.g.</i> , Cowan, Haney); Court acknowledges data in footnote. <sup>21</sup>	Majority acknowledges research, rejects it, and decides contrary to it. <sup>22</sup>
United States v. Owens, 484 U.S. 554 (1988)	Contrary	Whether an out-of-court statement identifying a person is sufficiently reliable to be used in court (hearsay)	Brief discusses eyewitness identification research ( <i>e.g.</i> , Yarmey, Loftus). <sup>23</sup>	Research ignored; not discussed or cited. <sup>24</sup>

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17. Reply Brief for Petitioner at 11 n.9.

18. *Gray*, 481 U.S. at 648.

19. *Rock*, 483 U.S. at 60; Brief for Respondent at 9, 14.

20. *Rock*, 483 U.S. at 61-62.

21. *Buchanan*, 483 U.S. at 415 n.16.

22. *Id.* at 420.

23. Brief for Respondent at 21 n.13, 24 nn.15-16.

24. *Owens*, 484 U.S. at 554.

## APPENDIX II

## SUPREME COURT TRIAL LAW CASES, 1965-1988

- Adams v Texas, 448 U.S. 38 (1980).  
Ake v Oklahoma, 470 U.S. 68 (1985).  
Apodaca v Oregon, 406 U.S. 404 (1972).  
Arizona v Washington, 434 U.S. 497 (1978).  
Atlas Roofing Co. v OSHA, 430 U.S. 442 (1977).  
Ballew v Georgia, 435 U.S. 223 (1978).  
Barefoot v Estelle, 463 U.S. 880 (1983).  
Batson v Kentucky, 476 U.S. 79 (1986).  
Booth v Maryland, 482 U.S. 496 (1987).  
Bourjaily v United States, 483 U.S. 171 (1987).  
Brewer v Williams, 430 U.S. 387 (1977).  
Brooks v Tennessee, 406 U.S. 605 (1972).  
Buchanan v Kentucky, 483 U.S. 402 (1987).  
Burch v Louisiana, 441 U.S. 130 (1979).  
Caldwell v Mississippi, 472 U.S. 320 (1985).  
California v Ramos, 463 U.S. 992 (1983).  
Carter v Kentucky, 450 U.S. 288 (1981).  
Chandler v Florida, 449 U.S. 560 (1981).  
Colgrove v Battin, 413 U.S. 149 (1973).  
Connecticut v Johnson, 460 U.S. 73 (1983).  
Cruz v New York, 481 U.S. 186 (1987).  
Cupp v Naughten, 414 U.S. 141 (1973).  
Curtis v Loether, 415 U.S. 189 (1974).  
Delaware v Van Arsdall, 475 U.S. 673 (1986).  
Donnelly v DeChristoforo, 416 U.S. 637 (1974).  
Duncan v Louisiana, 391 U.S. 145 (1968).  
Duren v. Missouri, 439 U.S. 357 (1979).  
Engle v. Isaac, 456 U.S. 107 (1982).  
Estes v Texas, 381 U.S. 532 (1965).  
Francis v Franklin, 471 U.S. 307 (1985).  
Globe Newspapers v Superior Court, 457 U.S. 596 (1982).  
Granberry v Greer, 481 U.S. 129 (1987).  
Gray v Mississippi, 481 U.S. 648 (1987).  
Greer v Miller, 483 U.S. 756 (1987).  
Ham v South Carolina, 409 U.S. 524 (1973).  
Hamling v United States, 418 U.S. 87 (1974).  
Hernandez v Texas, 347 U.S. 475 (1975).  
Herring v New York, 422 U.S. 853 (1975).  
Holbrook v Flynn, 475 U.S. 560 (1986).  
James v Kentucky, 466 U.S. 341 (1984).  
Jenkins v Anderson, 447 U.S. 231 (1980).  
Johnson v Louisiana, 406 U.S. 356 (1972).  
Kentucky v Stincer, 482 U.S. 730 (1987).  
Lakeside v Oregon, 435 U.S. 333 (1978).  
Lassiter v Department of Social Servs., 452 U.S. 18 (1981).  
Lee v Illinois, 476 U.S. 530 (1986).  
Lehman v Nakashian, 453 U.S. 156 (1981).  
Lockett v Ohio, 438 U.S. 586 (1978).  
Lockhart v McCree, 476 U.S. 162 (1986).

- Lowenfield v. Phelps, 484 U.S. 231 (1988).  
Luce v. United States, 469 U.S. 38 (1984).  
Ludwig v. Massachusetts, 427 U.S. 618 (1976).  
Manson v. Brathwaite, 432 U.S. 98 (1977).  
Marshall v. Lonberger, 459 U.S. 422 (1983).  
McDonough Power Equip. v. Greenwood, 464 U.S. 548 (1984).  
Morris v. Slappy, 461 U.S. 1 (1983).  
Murphy v. Florida, 421 U.S. 794 (1975).  
Nebraska Press Ass'n v. Stuart, 427 U.S. 539 (1976).  
Nix v. Whiteside, 475 U.S. 157 (1986).  
Ohio v. Roberts, 448 U.S. 56 (1980).  
Parklane Hosiery Co. v. Shore, 439 U.S. 322 (1979).  
Patton v. Yount, 467 U.S. 1025 (1984).  
Pernell v. Southall Realty, 416 U.S. 363 (1974).  
Richardson v. Marsh, 481 U.S. 200 (1987).  
Richmond Newspapers v. Virginia, 448 U.S. 555 (1980).  
Ristano v. Ross, 424 U.S. 589 (1976).  
Rock v. Arkansas, 483 U.S. 44 (1987).  
Rosales-Lopez v. United States, 451 U.S. 182 (1981).  
Sandstrom v. Montana, 442 U.S. 510 (1979).  
Smith v. Phillips, 455 U.S. 209 (1982).  
South Dakota v. Neville, 459 U.S. 553 (1983).  
Strickland v. Washington, 466 U.S. 668 (1984).  
Tanner v. United States, 483 U.S. 107 (1987).  
Taylor v. Illinois, 484 U.S. 400 (1988).  
Taylor v. Louisiana, 419 U.S. 522 (1975).  
Tennessee v. Street, 471 U.S. 409 (1985).  
Test v. United States, 420 U.S. 28 (1975).  
Trammel v. United States, 445 U.S. 40 (1980).  
Tull v. United States, 481 U.S. 412 (1987).  
Turner v. Louisiana, 379 U.S. 466 (1965).  
Turner v. Murray, 476 U.S. 28 (1986).  
Turner v. United States, 396 U.S. 398 (1970).  
United States v. Abel, 469 U.S. 45 (1984).  
United States v. Frady, 456 U.S. 152 (1982).  
United States v. Gillock, 445 U.S. 360 (1980).  
United States v. Hasting, 461 U.S. 499 (1983).  
United States v. Havens, 446 U.S. 620 (1980).  
United States v. Inadi, 475 U.S. 387 (1986).  
United States v. Leon, 468 U.S. 897 (1984).  
United States v. Owens, 484 U.S. 554 (1988).  
United States v. Robinson, 485 U.S. 25 (1988).  
United States v. Valenzuela-Bernal, 458 U.S. 858 (1982).  
United States v. Young, 470 U.S. 1 (1985).  
Upjohn Co. v. United States, 449 U.S. 383 (1981).  
Wainwright v. Witt, 469 U.S. 412 (1985).  
Watkins v. Sowders, 449 U.S. 341 (1981).  
Williams v. Florida, 399 U.S. 78 (1970).  
Witherspoon v. Illinois, 391 U.S. 510 (1968).

