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## EXTRA-LEGAL INFLUENCES, GROUP PROCESSES, AND JURY DECISION-MAKING: A PSYCHOLOGICAL PERSPECTIVE\*

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J. NEIL ROBINSON†

Observers of our legal system have long been impressed with the willingness of American litigants to turn over important and complicated disputes to groups of conscripted laymen.<sup>1</sup> Two aspects of the jury have been an enduring source of interest to its critics and defenders. The first is the sensitivity of lay decision-makers to concerns that are officially irrelevant to the resolution of the case: the personal and equitable factors of which the applicable law takes no account. At best, this sensitivity is displayed in the conscientious refusal of juries to enforce unreasonable laws or rules of evidence through the act of jury nullification.<sup>2</sup> At worst, this sensitivity manifests itself in harsh or capricious decisions based on legally and morally irrelevant factors as, for example, the race or sex of the parties. The second aspect of continuing interest is the process of group decision-making, which until recently always involved the dynamics of reaching a unanimous verdict.<sup>3</sup> This process, taut with the tension between consensus and individual conscience, has been praised as a means of encouraging debate, combating prejudice, and ensuring a diversity of perspectives.<sup>4</sup> It has also been lamented, particularly on the occasions when a jury is hung at the end of a protracted and expensive trial, or returns a breathtaking damage

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1. The democratic character of the American jury has impressed both its warmest defenders, e.g., A. DE TOCQUEVILLE, 1 *DEMOCRACY IN AMERICA* 291-97 (1966), and its harshest critics, e.g., J. FRANK, *COURTS ON TRIAL* 108-25 (1949). See generally R. SIMON, *THE JURY: ITS ROLE IN AMERICAN SOCIETY* 11-26 (1980).

2. See Pound, *The Law in Books and the Law in Action*, 44 *AM. L. REV.* 12, 18 (1910).

3. The use of non-unanimous verdicts by state courts was upheld in *Apodaca v. Oregon*, 406 U.S. 404 (1972).

4. E.g., Joiner, *From the Bench*, in *THE JURY SYSTEM IN AMERICA: A CRITICAL OVERVIEW* 145, 146-47 (R. Simon ed. 1975).

award with what appears to be indecent haste.<sup>5</sup>

This article will study the interplay of these two aspects of jury decision-making from the perspective of social science. Specifically, we will review the psychological research in two areas: non-evidentiary influences on jury judgments, and group problem-solving and decision-making. We will consider various ways in which group processes found to operate in a wide variety of situations may affect the impact of non-evidentiary influences that have been convincingly demonstrated. If there is a single thesis whose validity we are investigating, it is a position articulated forty-five years ago by the experimental psychologist J. F. Dashiell. In a surprisingly contemporary passage he wrote:

Nowhere has the idea that the individual judgment is improved by conference with others been more insistently held, nor the right to have the opinion of one replaced by discussion by many more jealously guarded, than in the trial by jury. These latter days, it is true, have seen plentiful attacks upon the jury system, many suggestions of supplanting it with single trained judges or commissions of fact-finders; but the tenacity with which the system is upheld is impressive. True, the motives operating are mixed: the very humanness of the twelve good men and true offers a better target for wily and dramatic appeals, and there may be a natural distrust by the man of simple habits of the learned-judge class, and he may prefer a common jury to serve as an emotional balance-wheel amid the machinery of legalisms. But surely the central thread of the arguments for juries is that twelve heads are better than one. In these days, when the system has been under fire, it is appropriate that experimentalists have tried their hand at unraveling some of the complications.<sup>6</sup>

The better part of this article will be spent unraveling some of the complications, although we will doubtless raise a few along the way. We will consider, from several perspectives, the question of whether twelve heads are better than one at resisting, or at least selectively responding to, the variety of extra-legal influences to which a trial fact-finder is subjected. First, we will assess what has actually been concluded about extra-legal influences in order to ascertain if lay fact-finders are really as susceptible as their critics suppose. Second, we will attempt to outline the various ways in which extra-legal factors can influence the decision-making process, and cite evidence for the operation of these forms of influence in jury decision-making. Third, we will discuss some of the major findings about group processes which may affect the reception of extra-legal influences, in particular the group polarization effect. Fourth, we will review a theory of information inte-

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5. For example, recall the critical reaction to the large award in the "Pinto" case. See note 229 *supra*.

6. Dashiell, *Experimental Studies of the Influence of Social Situations on the Behavior of Individual Human Adults*, in HANDBOOK SOC. PSYCH. 1097, 1133 (C. Murchison ed. 1935).

gration containing a specific hypothesis about the effect of group deliberation on extra-legal influences. In the fifth section we will discuss several experimental studies that cast doubt on this hypothesis. Finally, we will present an experiment of our own that explores several of the issues raised in the preceding discussion, and will propose a course for future research.

Our point of departure, to which we will continually return, is the magisterial work of Harry Kalven and Hans Zeisel, *The American Jury*.<sup>7</sup> This comprehensive study, initiated by the Chicago Jury Project in the mid-fifties, might have been expected to confirm the misgivings that were then prevalent concerning the institution: that the typical jury lacked the discipline and understanding to render fair decisions in most cases.<sup>8</sup> This dim view of jury capacity, a tenet of the then fashionable legal realism, had never received more than anecdotal confirmation.<sup>9</sup> Kalven and Zeisel studied jury performance by reviewing 3,576 state and federal criminal trials. They compared the jury verdicts reached in those trials with the "verdicts" solicited from the presiding judges.<sup>10</sup> Most of *The American Jury* is a richly detailed analysis of the evidentiary, equitable, and prejudicial factors that account for the more than 1,200 cases of total or partial disagreement their survey revealed.

Their results were a striking vindication of jury competence. Kalven and Zeisel found that jury verdicts were remarkably sensitive to the strength of the evidence as rated by the trial judges.<sup>11</sup> In the large majority of cases in which judge and jury disagreed, the disagreement rested on evidentiary issues about which reasonable men could differ,<sup>12</sup> equitable concerns which the jury shared with legal critics and legislators,<sup>13</sup> or a combination of evidentiary and equitable issues.<sup>14</sup> This was hardly the legal realist's picture of an undisciplined rabble settling cases by prejudice and caprice.<sup>15</sup>

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7. H. KALVEN & H. ZEISEL, *THE AMERICAN JURY* (1966).

8. J. Frank's influential case against jury decision-making is notably long on impressions and short on research. See J. FRANK, *supra* note 1.

9. R. SIMON, *supra* note 1, at 15-16.

10. H. KALVEN & H. ZEISEL, *supra* note 7, at 10. The judges surveyed were asked to report on the reasons for disagreement. Their comments became the basis of the researchers' analysis of the sources of judge-jury divergence. *Id.* at 92-97. Whenever possible, the validity of the observations from the bench was checked by matching otherwise similar cases that differed in the presence or absence of the cited factor. A significant difference in judge-jury disagreements between matched cases would tend to confirm the influence of the cited factor. This second method of analysis is called cross-tabulation. See *id.* at 88-91, 97-103 for a discussion of this method.

11. *Id.* at 149-62.

12. *Id.* at 115-16, 166-90.

13. *Id.* at 115-16, 219 *passim*.

14. *Id.* at 115-16.

15. As Kalven & Zeisel remark, "The realist emphasis seemed often to lend itself to a kind of inside dopester jurisprudence in which the real reason for decision would be very different from the surface reasons, and probably rather nasty." The authors offer a contrary view: "For the

Curiously, Kalven and Zeisel did not feel that group decision-making made an important contribution to the disagreements they discovered between judges and juries. In a frequently quoted passage, they relate what they call their "radical hunch" about the limited role of group influences: "The deliberation process might well be likened to what the developer does for an exposed film: it brings out the picture, but the outcome is predetermined."<sup>16</sup> Before offering a dissent to this view, let us turn to the main body of Kalven and Zeisel's findings, which concerns the incidence and the causes of disagreement between juries and judges.

### I. PREVIOUS RESEARCH ON EXTRA-LEGAL INFLUENCES ON JUROR DECISION-MAKING

In their analysis of the sources of judge-jury disagreement, Kalven and Zeisel came to several conclusions heartening to defenders of jury competence. First, the incidence of disagreement was not very high. Differences were found in only thirty-four percent of the cases. Only nineteen percent of the cases involved total disagreement; that is, one fact-finder acquitting while the other convicted. The remaining fifteen percent involved hung juries, and differences on charge and penalty.<sup>17</sup> Second, the majority of the reasons found for disagreement (fifty-four percent) involved close issues of evidence,<sup>18</sup> such as the credibility of first-time defendants<sup>19</sup> and the proper threshold for proof beyond a reasonable doubt.<sup>20</sup> Twenty-nine percent of the reasons for disagreement had to do with what Kalven and Zeisel called "sentiments about the law"<sup>21</sup>—equitable concerns such as the fault of the victim,<sup>22</sup> the disproportion of the punishment,<sup>23</sup> or selective enforcement of the law.<sup>24</sup> Only eleven percent of the reasons for disagreement concerned "sentiments about the defendant"<sup>25</sup>—the prejudicial factors of age, status, and beauty that the legal realists would have expected to be predominant. For example, attractive defendants, where present, were found to cause disagreement in only twenty percent of the cases.<sup>26</sup>

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largest part the hidden reasons of the jury are reasons which can stand public scrutiny; not infrequently, the jury's rule turns out to be the law in another jurisdiction." H. KALVEN & H. ZEISEL, *supra* note 7, at 497.

16. *Id.* at 489.

17. *Id.* at 62.

18. *Id.* at 115.

19. *Id.* at 178-81.

20. *Id.* at 182-90.

21. *Id.* at 107-08.

22. *Id.* at 242-57.

23. *Id.* at 306-12.

24. *Id.* at 313-17.

25. *Id.* at 107, 115.

26. *Id.* at 217.

Third, these two types of extra-legal influences—sentiments about the case and the defendant—were rarely the sole reason found for disagreement. Seventy-eight percent of the time that case sentiments were involved in the disagreement, they were accompanied by other reasons, while other factors appeared with defendant sentiments a full ninety-two percent of the time.<sup>27</sup> These findings led Kalven and Zeisel to an important conclusion about the role of prejudicial influences:

Sentiments about the individual defendant are seldom powerful enough to cause disagreement by themselves; rather, they gain their effectiveness only in partnership with some other factor in the case. The implication again is that for the defendant to be poor and crippled or beautiful and blonde is by itself rarely a sufficient stimulus for the jury to disagree with the judge.<sup>28</sup>

When they categorized all disagreements into matters of fact—evidentiary issues, and matters of value—under which they included all other reasons for disagreement, Kalven and Zeisel found that thirty-four percent of the differences involved facts alone, forty-five percent facts and values, and twenty-one percent values alone.<sup>29</sup> For the plurality of cases involving facts and values, the authors suggest a generalization of the account given for the role of defendant sentiments, which they call the “liberation hypothesis”:

The closeness of the evidence makes it possible for the jury to respond to sentiment *by liberating* it from the discipline of the evidence. . . .

We know . . . that the jury does not often consciously and explicitly yield to sentiment in the teeth of the law. Rather it yields to sentiment in the apparent process of resolving doubts as to evidence. The jury, therefore, is able to conduct its revolt from the law within the etiquette of resolving issues of facts.<sup>30</sup>

We will treat the judge-jury disagreements found to occur with some regularity as areas of proven extra-legal influence. This implies no judgment about which side should be favored in the case of conflict: that will depend on the legitimacy of the extra-legal factors to which the jurors appear to be subject. As Kalven and Zeisel remark, “[D]epending on how one looks at it, the jury can be said to do equity, to legislate interstitially, to implement its own norms, or to exhibit bias.”<sup>31</sup> Although most of the disagreements found by the Chicago researchers involve evidentiary issues, and hence are not strictly extra-legal,<sup>32</sup> these issues rarely present simple differences in judgments of credibility and likelihood. As Kalven and Zeisel point out, they will

27. *Id.* at 113.

28. *Id.* at 114.

29. *Id.* at 116.

30. *Id.* at 165.

31. *Id.* at 494.

32. *Id.* at 116.

often reflect the concealed influence of sentiments above the law and the defendant.<sup>33</sup> And even when the evidentiary disputes are "pure" in Kalven and Zeisel's terms,<sup>34</sup> they may not arise from simple differences in probability assessment. Disagreement on the proper threshold for decision, or on the appropriate level of skepticism with which to receive the testimony of certain types of witnesses (for example), reflect differences in values rather than inferential strategies. For this reason, we find it helpful to include jury disagreements in these areas under the rubric of extra-legal influence.

*The American Jury* presented a picture of conscientious and competent jurors, sometimes influenced by equitable concerns in resolving close cases, less often by personal prejudice. In contrast, the view of the juror that would have emerged from a review of the experimental literature five or six years ago would have served to confirm the old courtroom adage quoted approvingly by Judge Frank: "Mr. Prejudice and Miss Sympathy are the names of witnesses whose testimony is never recorded, but must nevertheless be reckoned with in trials by jury."<sup>35</sup> The simulated jurors studied by social psychologists displayed a susceptibility to extra-legal factors that would not have disappointed a confirmed legal realist.<sup>36</sup> The physical attractiveness,<sup>37</sup> moral character,<sup>38</sup> and sex of the parties;<sup>39</sup> the extent of the victim's and defendant's injuries;<sup>40</sup> adverse pretrial publicity;<sup>41</sup> and the jurors' own authoritarian leanings<sup>42</sup> were shown to make a significant difference in trial outcome. The influential factors ranged from legally and morally irrelevant matters (like the defendant's physical attractiveness),<sup>43</sup>

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33. *Id.* 165, 495.

34. *Id.* 166-67.

35. J. FRANK, *supra* note 1, at 122.

36. Many of these findings are cited in a recent diatribe against the jury system. A. STRICK, *INJUSTICE FOR ALL* 167-97 (1977). For a more dispassionate review of the state of the research five years ago, see Stephan, *Selective Characteristics of Jurors and Litigants: Their Influences on Juries' Verdicts*, in *THE JURY SYSTEM IN AMERICA: A CRITICAL OVERVIEW* 97 (R. Simon ed. 1975).

37. *E.g.*, Kulka & Kessler, *Is Justice Really Blind? The Influence of Litigant Physical Attractiveness on Juridical Judgment*, 8 *J. APPLIED SOC. PSYCH.* 366 (1978).

38. *E.g.*, Landy & Aronson, *The Influence of the Character of the Criminal and His Victim on the Decisions of Simulated Jurors*, 5 *J. EXPERIMENTAL SOC. PSYCH.* 141 (1969).

39. *E.g.*, Stephan, *Sex Prejudice in Jury Simulation*, 88 *J. PSYCH.* 305 (1974).

40. *E.g.*, Austin, Walster, & Utne, *Equity and the Law: The Effect of a Harmdoer's "Suffering in the Act" on Liking and Assigned Punishment*, 9 *ADVANCES EXPERIMENTAL SOC. PSYCH.* 163 (L. Berkowitz & E. Walster eds. 1976).

41. *E.g.*, Sue, Smith, & Gilbert, *Biasing Effects of Pretrial Publicity on Judicial Decisions*, 2 *J. CRIM. JUST.* 163 (1974).

42. *E.g.*, Mitchell & Byrne, *The Defendant's Dilemma: Effects of Jurors' Attitudes and Authoritarianism on Judicial Decisions*, 25 *J. PERSONALITY & SOC. PSYCH.* 123 (1973).

43. *E.g.*, Efran, *The Effect of Physical Appearance on the Judgment of Guilt, Interpersonal Attraction, and Severity of Recommended Punishment in a Simulated Jury Task*, 8 *J. PERSONALITY RESEARCH* 45 (1974).

through issues bearing on the equities of the case but not relevant to the legal issue (such as the harm already suffered by the defendant),<sup>44</sup> to highly probative evidence (like illegal wiretaps, excluded solely for policy reasons).<sup>45</sup> The susceptibility of the jury did not seem to depend on even the broader relevance of the manipulated factors.

The reasons for this impression of wholesale susceptibility are not hard to discover. Few of these early studies were designed as simulations of actual jury behavior. Rather, they used mock trials as a convenient setting to test general theories of social influence. In accordance with a well-established research tradition in social psychology, these studies were designed to draw out the effect of social forces, not to gauge their impact in actual settings.<sup>46</sup> This is a perfectly legitimate strategy for theoretical research, but not for trial simulation. The question for applied research is not whether various biasing factors may distort judgment—that may be conceded—but whether they will do so in the context of a procedure which attempts to limit and counteract their influence. A simulation fails to address that question if it ignores the restrictions, safeguards, and “noise” found in an actual trial setting. To some extent, then, the objectives of theoretical and applied research work at cross purposes.<sup>47</sup>

The tension between research objectives may be seen in Landy and Aronson’s influential study, “The Influence of the Character of the Criminal & His Victim on the Decisions of Simulated Jurors.”<sup>48</sup> The authors set out to display the effect of character evidence by making one defendant as appealing as possible, the other as unsavory, in an otherwise identical case. Subjects in the “unattractive” condition read the following description of the defendant:

[Defendant is] a notorious gangster and syndicate boss who had been vying for power in the syndicate controlling the state’s underworld activities. He was best known for his alleged responsibility in the River-view massacre of five men. At the time of the incident, Lowe was carrying a loaded 32-caliber pistol which was found on his body. He had been out of jail on bond, awaiting trial on a double indictment of mail fraud and income tax evasion.<sup>49</sup>

This character sketch takes up over a third of the trial summary. Sub-

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44. Austin, Walster, & Utne, *supra* note 40.

45. E.g., Sue, Smith, & Caldwell, *Effects of Inadmissible Evidence on the Decisions of Simulated Jurors: A Moral Dilemma*, 3 J. APPLIED SOC. PSYCH. 345 (1973).

46. A point similar to that developed in this paragraph is made by D. Colasanto & J. Sanders, *Methodological Issues in Simulated Jury Research* 4 (unpublished revision of a paper delivered at 1978 meetings of Law & Soc’y Assn.).

47. For a discussion of a related problem, the differing methodological objectives in research on legal theory and practice, see Lind & Walker, *Theory Testing, Theory Development, and Laboratory Research on Legal Issues*, 3 L. & HUMAN BEHAVIOR 5 (1979).

48. Landy & Aronson, *supra* note 38.

49. *Id.* at 147-48.



jects reading this impressive defamation are then asked to give their *personal judgment* on the amount of *punishment* the defendant should receive.<sup>50</sup> It is hard to imagine how such evidence could have failed to make a difference, and correspondingly hard to see the theoretical, let alone practical, significance of the finding that it did influence judgments.

Landy and Aronson's experiment nicely illustrates the now familiar litany of complaints about the validity of trial simulations in social psychology.<sup>51</sup> Not only is the extra-legal factor often the most salient feature of the stimulus material (an acceptable emphasis in a theoretical study), but it is presented in a manner that underlines its importance and encourages its uncritical reception. The manipulation is generally embedded in a brief printed summary, supposed to be the functional equivalent of a trial.<sup>52</sup> Its very prominence would suggest to the subject that it was properly to be taken into account, an impression that is rarely contradicted by instructions on the proper use of the evidence. Further, the subjects in many of these experiments were only nominally jurors. Apart from being labelled as such, they were subject to none of the constraints or pressures that would encourage objectivity and impartiality in a real trial: they received no voir dire, no oath, no restrictive instructions; they did not deliberate as a group or reach a group decision; and there were, of course, no real consequences.<sup>53</sup> Finally, they were often asked to decide on punishment, not guilt, a decision for

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50. *Id.* at 148.

51. The most important critique of jury simulations in social psychology is probably D. Colasanto & J. Sanders' working paper, *supra* note 46. Not only were Sanders and Colasanto among the first to make some of the criticisms noted below, but they illustrated their critique with an impressive experiment. Adapting a real case, they demonstrated that the use of students rather than veteran jurors, and the failure to employ deliberation—two of the most common shortcomings of jury simulations—resulted in greatly reduced conformity to the legally correct model for decision-making. We will make frequent reference to this paper, largely in footnotes, because the complexity of Colasanto and Sanders' experiment makes it difficult to integrate into our textual discussion.

Another major critique of jury studies is Bermant, McGuire, McKinley, & Salo, *The Logic of Simulation in Jury Research*, 1 CRIM. JUST. & BEHAVIOR 224 (1974). The authors complained about the lack of structural verisimilitude in most simulations; that is, realism in the stimulus material presented and the subjects to whom it was presented. Like Sanders and Colasanto, they confirmed their misgivings experimentally, showing that differences in the medium of presentation, from printed summary to audio-visual enactment, made a significant difference in the verdicts reached in a homicide case. Recently, an entire issue of *Law & Human Behavior* has been devoted to "Simulation Research and the Law." See 3 L. & HUMAN BEHAVIOR (1979). It contains two very harsh appraisals of jury simulation research: Weiten & Diamond, *A Critical Review of the Jury Simulation Paradigm*, *id.* at 71-93; Vidmar, *The Other Issues in Jury Simulation Research*, *id.* at 95-106; and a more sympathetic piece, Bray & Kerr, *Use of the Simulation Method in the Study of Jury Behavior*, *id.* at 107-19, that may signal the emergence of a revisionist trend.

52. See D. Colasanto & J. Sanders, *supra* note 46, at 3-4, 28-29 nn.4-5.

53. *Id.* at 5-6, 29-30 nn.7-8. On the lack of real consequences, obviously the least tractable problem in simulation research, see Bray & Kerr, *supra* note 51, at 113-14.

which many of the manipulated factors were arguably relevant.<sup>54</sup>

In experiments that have presented more realistic case material, or encouraged more serious role involvement on the part of subject-jurors, the influence of extra-legal factors has not been so uniform. At least two types of studies suggest that the effect of the manipulated information about the defendant varies with its actual relevance to the case and the opportunity to deliberate about the evidence.<sup>55</sup>

In the first group of cases, juror responses appear to be affected more by the probative than by the prejudicial value of the extra-legal factors manipulated. Sealy and Cornish,<sup>56</sup> using audio-taped trials and deliberating juries, found that the introduction of the defendant's prior record (without restrictive instructions) increased the frequency of conviction. However, the increase was much greater when the record disclosed crimes similar to the one presently charged, which would obviously be more probative than unrelated crimes.<sup>57</sup> This was true even when the similar offense (theft) was likely to be far less damaging to the overall evaluation of the defendant than the dissimilar one (child-molesting).<sup>58</sup> Shaffer, Case, and Brannen<sup>59</sup> found that mock jurors' convictions increased significantly when the defendant claimed a fifth amendment freedom from self-incrimination regarding questions about the offense charged, but not about unrelated past offenses. They found a significant difference in the conviction rates when case-relevant and case-irrelevant evidence was withheld, even though there was no significant difference in the adverse effect of the two types of withholding on jurors' assessments of the defendant's character.<sup>60</sup> Thus, as with Cornish and Sealy, general character judgments did *not* affect the conviction rate independently of the strength of the evidence. Finally, in the carefully staged, painstakingly realistic simulations headed by Miller,<sup>61</sup> jurors proved consistently resistant to a variety of mundane extra-legal factors—such as prior convictions for minor, unrelated offenses—to which real jurors are most likely to be exposed.

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54. See D. Colasanto & J. Sanders, *supra* note 46, at 5.

55. In their previously cited demonstration, D. Colasanto & J. Sanders found an interesting interaction of case-relevance and type of subject. For a single item of evidence, ex-jurors were influenced by its probative value for the case, students by the pro-defendant sympathies it engendered. *Id.*

56. L.S.E. Jury Project, *Juries and the Rules of Evidence*, 1973 CRIM. L. REV. 208 (1973) (P. Sealy & W. Cornish directors).

57. *Id.* at 212-19.

58. *Id.*

59. Shaffer, Case, & Brannen, *Effect of Withheld Evidence on Juridic Decisions: Amount of Evidence Withheld and Its Relevance to the Case*, 10 REPRESENTATIVE RESEARCH SOC. PSYCH. 2 (1979).

60. *Id.* at 10-13.

61. See Miller, *The Effect of Videotaped Trial Materials on Juror Response*, in PSYCHOLOGY AND THE LAW 185, 195-99 (G. Bermant, C. Nemeth, & N. Vidmar eds. 1976).

In a second group of experiments, a prejudicial factor with very low relevance was found to affect juror verdicts before, but not after deliberation. Izzett and Leginski<sup>62</sup> found that the biasing effect of defendant attractiveness disappeared after deliberation. Kaplan and L. Miller<sup>63</sup> found that individual jurors were more certain of the defendant's guilt when his attorney or even the judge behaved obnoxiously during the trial. After deliberation, however, this effect of courtroom conduct disappeared. In what appears to be a contradictory result, Hans and Doob<sup>64</sup> found that revelation of a single previous conviction (apparently for a similar offense), accompanied by an instruction that it was to be used only in assessing credibility, had no effect on individual jurors, but did influence the decisions of deliberating groups. The effect on the groups was quite dramatic: "Forty percent of the juries that heard of the accused man's criminal record arrived at guilty verdicts, whereas none of the juries that heard nothing about the criminal record arrived at this verdict."<sup>65</sup>

We will review this apparent contradiction when we discuss the group polarization effect; for now, what is of interest is the manner in which the prior crime evidence was used by Hans and Doob's deliberating juries. It was *not* adduced to show the defendant's propensity to commit crimes in direct violation of the judge's instruction. As Kalven and Zeisel noted, jurors seem reluctant to bring up improper considerations in the teeth of the law.<sup>66</sup> Rather, as Doob describes it, the juries' discussion provides a good illustration of how extra-legal influences can affect the decision "within the etiquette" of evaluating the admissible evidence:

The initial statements that were made when the jury began to deliberate were much more likely in the record condition to be unfavorable to the accused. As the discussion progressed, it was clear that the information about the previous criminal conviction was affecting the discussion in other subtle ways. Thus, the record groups were more likely to discuss matters that hurt the defendant's case; they were more likely to think that the various pieces of evidence that the prosecution mentioned were strong, and so forth. All in all, the nature of the deliberations was quite different as a result of this one piece of evidence.<sup>67</sup>

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62. Izzett & Leginski, *Group Discussion and the Influence of Defendant Characteristics in a Simulated Jury Setting*, 93 J. SOC. PSYCH. 271 (1974).

63. Kaplan & L. Miller, *Reducing the Effect of Juror Bias*, 36 J. PERSONALITY & SOC. PSYCH. 1443 (1978).

64. Hans & Doob, *Section 12 of the Canada Evidence Act and the Deliberations of Simulated Juries*, 18 CRIM. L.Q. 235 (1976).

65. Doob, *Evidence, Procedure, and Psychological Research*, in PSYCHOLOGY AND THE LAW 135, 142 (G. Bermant, C. Nemeth, & N. Vidmar eds. 1976).

66. H. KALVEN & H. ZEISEL, *supra* note 7, at 165.

67. Doob, *supra* note 65, at 142.

## II. HOW EXTRA-LEGAL FACTORS MAY INFLUENCE JUROR DECISIONS

This last group of experiments presents a picture of the jury reasonably close to Kalven and Zeisel's: a conscientious group generally resisting prejudicial or other excluded considerations, more likely to be swayed when those considerations are relevant to the case and can insinuate themselves into a discussion of the admissible evidence. The above passage from Doob suggests various ways in which excluded information can affect deliberation without being explicitly considered. We will expand this list and discuss in greater detail some of the ways in which inadmissible evidence can influence the outcome of a case. Wherever possible, we will cite experiments in which excluded information has been shown or suggested to operate in this way. We will present these forms of influence roughly in ascending order of subtlety, starting with the most blatant, and later argue that several accounts of group deliberation fail to consider the more oblique ways in which bias and predisposition may affect the decision process.

### A. *The extra-legal factor may be explicitly considered and treated as having probative value just as any other item of evidence*

There is no doubt that decision-makers will sometimes disregard altogether restrictive instructions, and will reach their verdict "in the teeth of the law." The more relevant the excluded evidence, the more tempting and defensible it may seem to disregard such restriction. There is anecdotal and even some experimental evidence that such blatant disregard of restrictive instructions is not common.<sup>68</sup> It may be that most disregard is inadvertent, the result of a failure to understand or to remember restrictive instructions.

### B. *The extra-legal factor may affect the standard of proof*

As Thomas and Hogue,<sup>69</sup> Kerr,<sup>70</sup> and others have pointed out, the legal decision-maker must resolve two issues: the probability that a party is correct, and the threshold probability for finding in his favor. In civil cases, where the standard of proof is "a [mere] preponderance of the evidence," these separate tasks may be hard to distinguish. In criminal cases, however, the establishment of the threshold for reasonable doubt should present itself as a distinct task from the evaluation of the evidence.

68. See Broeder, *The University of Chicago Jury Project*, 32 NEB. L. REV. 744, 754 (1959).

69. Thomas & Hogue, *Apparent Weight of Evidence, Decision Criteria, and Confidence Ratings in Juror Decision Making*, 83 PSYCH. REV. 442 (1976).

70. KERR, *Severity of Prescribed Penalty and Mock Jurors' Verdicts*, 36 J. PERSONALITY & SOC. PSYCH. 1431 (1978).

While these issues may not always be distinguished by a deliberating jury, the law treats them very differently. It gives the jury almost unbridled freedom in weighing the evidence, but attempts to impose a decision threshold by setting a standard of proof. It is unlikely, however, that the law achieves the desired uniformity with the opaque instructions that jurors actually receive. For example, several studies have shown that jurors assign widely variant probabilities to proof beyond a reasonable doubt.<sup>71</sup>

Such variability makes it likely that the standard of proof will be subject to extra-legal influence. Kerr found that juries which estimated the probabilities of guilt no differently for an attractive and an unattractive defendant nonetheless convicted the latter more often.<sup>72</sup> This strongly suggests a lower standard of proof for the unattractive defendant. Similarly, but less disturbingly, he found that increasing the penalty for a given offense reduced the frequency of conviction but not the rated probability of guilt.<sup>73</sup> It seems likely that strong equitable or prejudicial concerns that have little bearing on the probabilities of the case will affect the outcome by implicitly changing the standard of proof. This change may not be the result of overt discussion, but rather of a difference in the consistency with which one side receives the benefit of the doubt or has its evidence more severely scrutinized, and thus may resemble one of the processes described below.

C. *The extra-legal factor may "slide into" a legitimate consideration that provides the basis or pretext for its consideration*

Discussing cases in which the unattractiveness of the defendant may have caused the jury to be more rigorous than the judge, Kalven and Zeisel note: "In the cases examined it is apparent that there is always a considerable link, in the eyes of the jury, between the unattractiveness of the defendant and his credibility."<sup>74</sup> It is hard to say if this exaggerated tendency is simply an error of judgment, or whether it is a case of judgment bending to accommodate prejudice. This form of influence has been studied in the experimental literature: Dion has claimed that the effect of physical appearance is generally mediated by credibility judgments, with more attractive parties perceived as more trustworthy.<sup>75</sup> Kulka and Kessler, however, have argued that the effect ob-

71. In particular, Simon, "Beyond a Reasonable Doubt"—An Experimental Attempt at Quantification, 6 J. APPLIED BEHAVIORAL SCI. 203 (1970); Simon & Mahan, *Quantifying Burdens of Proof: A View from the Bench, the Jury, and the Classroom*, 5 L. & SOC'Y REV. 319 (1971).

72. Kerr, *Beautiful and Blameless: Effects of Victim Attractiveness and Responsibility on Mock Jurors' Verdicts*, 4 PERSONALITY & SOC. PSYCH. BULL. 479 (1978).

73. Kerr, *supra* note 70.

74. H. KALVEN & H. ZEISEL, *supra* note 7, at 385.

75. Dion, *Physical Attractiveness and Evaluation of Children's Transgressions*, 24 J. PERSON-

served by Dion usually occurs when subjects are afforded merely a momentary glimpse of the target individual.<sup>76</sup> A brief exposure may encourage a “stereotypic” inference from attractiveness to honesty that will vanish with extended contact. There are other ways in which this passage from forbidden to legitimate considerations may take place. Kulka and Kessler claim that unattractive victims are perceived as having suffered less serious injuries, receiving less favorable verdicts through an insidious devaluation of their worth.<sup>77</sup> In our own experiment, we present jurors with a piece of evidence which both arouses pity and gives information about objective injury, and note the easy transition from one to the other.<sup>78</sup>

D. *By causing the decision-maker to favor one side, the extra-legal factor may motivate him to emphasize the evidence favoring that side*

Doob found that the primary effect of the defendant’s record on deliberation was to encourage the selective marshalling of pro-prosecution evidence.<sup>79</sup> The process is similar to that described in section C above, except that it does not require a special affinity between the excluded and admissible evidence. Further, the process described in that section can affect the evaluation of single items of evidence without requiring that the excluded information push the juror toward a particular outcome. Here, it is suggested that the excluded information causes the decision-maker to favor one side of the case, encouraging him to muster evidence in its support. The stronger the effect of the extra-legal factors in disposing the juror toward one side of the case, the more this process tends to resemble the rationalization of a decision already made.

E. *The extra-legal factor may so dispose the fact-finder toward one side of the case that it makes the evidence for that side appear much stronger*

This process may be similar to that described in section D, and is

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ALITY & SOC. PSYCH. 207 (1972). See Dion, Berscheid, & Walster, *What is Good is Beautiful*, 24 J. PERSONALITY & SOC. PSYCH. 285 (1972).

76. Kulka & Kessler, *supra* note 37, at 369.

77. *Id.* at 374-75.

78. As noted above, *supra* note 55, Sanders and Colasanto discovered that a single piece of information could be utilized more or less appropriately by different fact-finders. In the case they presented, knowledge that the victim of a theft was the state, rather than an individual, could have been used either to make credible the defendant’s belief that the goods were abandoned, or to make the loss appear less significant. The former, but not the latter, would be a legally permitted use of the evidence.

79. Doob, *supra* note 65, at 142.

also reported by Doob to be operating in his juries.<sup>80</sup> Here, in contrast to section D, the evidence favoring one side is not necessarily given more emphasis, but rather is perceived to favor that side more strongly. To suggest a distinction we will develop later, extra-legal factors may distort either the weight or the probative value of the evidence. Ostrom, Werner, and Saks found that both the comparative importance and the perceived probative value of items of evidence varied with the positions of the jurors concerning conviction and punishment.<sup>81</sup>

The exaggeration of the probative value of the evidence may occur in one of two ways. It may be a motivated distortion: a way of reconciling a commitment not to use that information with the belief that the excluded information really settles the issue. This process is familiar to social psychologists as one of the ways in which the dissonance created by conflicting commitments and beliefs may be resolved. While we have found no experiments which illustrate its operation in a trial context, there are dramatic illustrations of this effect in other settings.<sup>82</sup>

A second way in which excluded information may inflate the probative value of admitted evidence is simply by making it appear more informative or diagnostic. Because the excluded factors make a particular outcome appear more likely, the evidence favoring that outcome appears to have greater inferential value. B. Fischhoff called this the "hindsight effect,"<sup>83</sup> which he tested in an ingenious series of experiments.<sup>84</sup> In one of these,<sup>85</sup> subjects were asked to estimate the probability of a given outcome for a historical event with which they were previously unacquainted. They were presented with facts that favored both possibilities. One group of subjects was told what the actual outcome had been, then told to ignore this knowledge in giving their probability estimate. Not surprisingly, these subjects estimated the probability of the actual outcome to be much higher. They also found the evidence favoring that outcome to be more probative.

Clearly, these subjects were not *motivated* to distort the probabilities: in this guessing game they had no need to rationalize their preference for the actual outcome. Rather, it appears that subjects were simply not capable of disregarding what they had been told about the actual

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80. *Id.*

81. Ostrom, Werner, & Saks, *An Integration Theory Analysis of Jurors' Presumptions of Guilt or Innocence*, 36 J. PERSONALITY & SOC. PSYCH. 436 (1978).

82. *E.g.*, Knox & Inkster, *Postdecision Dissonance at Post Time*, 8 J. PERSONALITY & SOC. PSYCH. 319 (1968).

83. Fischhoff, *Hindsight-Foresight: The Effect of Outcome Knowledge on Judgment Under Uncertainty*, 1 J. EXPERIMENTAL PSYCH: HUMAN PERCEPTION & PERFORMANCE 288 (1975).

84. *Id.*; Fischhoff & Beyth, "*I Knew It Would Happen*": *Remembered Probabilities of Once-Future Things*, 13 ORGANIZATIONAL BEHAVIOR & HUMAN PERFORMANCE 1 (1975).

85. Fischhoff, *supra* note 83.

outcome: it had indelibly altered the way they perceived the strength of the evidence favoring that outcome.

This completes our outline of the forms of extra-legal influence. The list is by no means exhaustive; it is merely intended to highlight several proven forms of "liberation" from evidentiary constraints. Group decision-making may affect this process of liberation in a variety of ways. It may suppress it, either by stifling discussion of excluded information, or by exposing and discrediting extra-legal influences that would work silently on individual judgment. Alternatively, the group may heighten the impact of extra-legal factors by facilitating either the wholesale disregard of restrictive instructions or their circumvention. Until we know something about the way in which groups like juries operate, we cannot even speculate about which of these alternatives is more likely.

### III. GROUP PROCESSES RELEVANT TO JURY DELIBERATION

We now return to what Kalven and Zeisel call their "radical hunch" about the function of group deliberation—that "it does not so much decide the case as bring about the consensus, the outcome of which has already been made highly likely by the distribution of first ballot votes."<sup>86</sup> They do not claim that group processes are unimportant for juries, but that they have little effect on the verdict finally reached, and thus do not need to be addressed in a study of judge-jury outcome differences. But even this modest claim is called into question by the very data cited in its support.

Kalven and Zeisel had found in an earlier study that over ninety percent of all verdicts are in the direction of the first ballot majority.<sup>87</sup> The significance of this measure of comparison has been questioned by Lamberth.<sup>88</sup> He points out that jurors were asked about their first ballots *after* the verdict, and were thus less likely to have been willing or able to recall initial preferences at odds with the final decision. Further, the first ballot will often be taken after some deliberation, and hence may already reflect its influence.

But even if Lamberth's criticisms are unfounded, there are at least two reasons why the correspondence between initial majority and final verdict would not minimize the role of group deliberation in producing judge-jury differences. First, the nine percent of all cases in which initial pro-acquittal majorities convict or are hung, and more important, the fourteen percent of all cases where pro-conviction majorities are hung or acquit, may represent a disproportionate number of those cases in which judge and jury disagree. If so, these maverick juries would

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86. H. KALVEN & H. ZEISEL, *supra* note 7, at 489.

87. *Id.* at 487.

88. J. LAMBERTH, *SOCIAL PSYCHOLOGY* 468-71 (1980).



merit careful study as a major source of outcome divergence. But a disproportion in the other direction would be equally significant, because it would suggest that the success of the initial majority tends to amplify judge-jury disagreement. The data on initial majorities came from a study in which judge-jury differences were not reported; hence, Kalven and Zeisel provide no way of investigating these possibilities.

Second, Kalven and Zeisel present fully analyzed data only on criminal trials, in almost all of which the jury had only a yes/no decision to reach on each charge.<sup>89</sup> The effects of group deliberation may be more pronounced in a civil trial where juries have a continuous choice as well as a dichotomous one—the amount of damages to award if they find for the plaintiff. Kalven and Zeisel note that in a sample of these cases, the jury award averaged twenty percent more than the judge's in those cases where both found liability,<sup>90</sup> and this may well reflect an effect of group deliberation.

The point we wish to make here is simple: Kalven and Zeisel's data do not give us any reason to ignore the role of group processes in determining the effect of extra-legal factors. These factors have been shown to influence juror decisions in a variety of situations, and there is no reason why group processes should not mediate their effect. As will be discussed, one of the major group effects that psychologists have discovered is the heightening, or polarization, of the judgment made by an initial majority. This effect has been rather complacently taken to explain Kalven and Zeisel's finding on verdicts and first ballots.<sup>91</sup> We intend to argue that the application of the group polarization process to jury decisions is much more complicated than usually assumed, and to suggest how this process can lead to the reversal of an initial majority in some fairly common judgment situations.

Having stated our case for the potential significance of group processes for judge-jury disagreements, let us turn to the psychological research in the area. We will briefly present the psychological findings that bear on two aspects of jury decision-making: group problem-solving, and group-mediated attitude change. The issues a jury must resolve in reaching a verdict range from those on which there is an objectively correct answer to those that are ultimately matters of opinion or value.<sup>92</sup> There has been considerable psychological research on

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89. H. KALVEN & H. ZEISEL, *supra* note 7, at 62, 301 n.1.

90. *Id.* at 64 n.13.

91. *E.g.*, Myers & Lamm, *The Group Polarization Phenomenon*, 83 PSYCH. BULL. 602, 606 (1976).

92. Contrast a case in which the identity of the perpetrator is the sole question to one in which the issue is whether an undisputed course of conduct reveals a lack of due care. The first is a "simple matter of fact"; the second involves a standard of conduct which the jurors, as representatives of the community, help to establish. Damaska makes a related distinction between "factual findings" and "legal decisions." Damaska, *Presentation of Evidence and Factfinding Precision*, 123

the role of groups in resolving both kinds of issues.

### A. *Research on Group Problem-Solving*

Studies of group problem-solving have generally focused on problems for which there is a correct answer, known to the experimenter, and on other performances for which there are objective criteria of success.<sup>93</sup> The applicability of this research to jury behavior is obviously limited by the difficulty of having to specify the correct verdict in advance. Still, this does not make objective assessment of jury performance impossible. Even if the ultimate truth of the matter in a legal conflict may not be known, there are objective standards by which to judge jury performance. Kalven and Zeisel adopted the judge's decision as the "legally correct" outcome by which the conformity of the jury to "professional" standards could be assessed.<sup>94</sup> Further, the jury may have sub-tasks on which there is clearly a correct answer, or at least demonstrably wrong answers. The recall of the evidence actually presented at trial is one such objectively assessable task. A transcript of a jury deliberation would undoubtedly reveal at least a handful of oversights, exaggerations, and logical errors by at least some of the participants. Thus, the jury will confront certain problems that have objectively correct solutions.

Having insisted that the research on group problem solving is applicable to jury decision-making, we must now admit that it may not be very useful. Much of the research in this area has studied group facilitation or interference across a wide range of problems, without analyzing the differential effect of groups on different kinds of tasks. This shortcoming is complemented by a deficiency in the analysis of legal decisionmaking: the type of cognitive task performed by trial factfinders is not very well understood. Only in the past decade has the inferential process involving the integration of probabilistic evidence been analyzed by mathematical psychologists,<sup>95</sup> and the affinities of this process with the tasks commonly employed in the group problem-solving literature have yet to be explored. Nevertheless, I. Steiner has recently developed a common-sense taxonomy of tasks, and demon-

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U. PA. L. REV. 1083, 1086-87 (1975). Of course, most cases involve issues of fact and value in complex relation, and as we intend to argue, even simple fact-determination is laden with value judgments. This point is also made in our discussion of the value differences that may be inherent in even "pure" evidentiary disagreements. See text accompanying note 34 *supra*.

93. See generally GROUP PROCESSES 1-113 (L. Berkowitz ed. 1978).

94. The use of the judge's hypothetical decision as a standard for comparison is defended by Kalven and Zeisel. H. KALVEN & H. ZEISEL, *supra* note 7, at 51-54.

95. See, e.g., Schum, *The Weighting of Testimony in Judicial Proceedings from Sources Having Reduced Credibility*, 17 HUMAN FACTORS 172 (1975).

strated the varying effect of groups on different task areas.<sup>96</sup> His distinctions will at least suggest some ways in which jury deliberation may improve on or detract from individual performance. Steiner classified tasks by the relationship of individual performance to group performance. Cumulative tasks are those where the responses of the group members are simply pooled; that is, where the group that has the largest total "wins."<sup>97</sup> Naturally, the larger the group, the better it does, with some diminishing returns due to coordination problems, diffused responsibility, and reduced motivation. Tug-of-war is the obvious and most frequently cited example of this kind of task. Compartmentalized tasks are assignments that can be divided into a number of sub-tasks, with members assigned to the area for which they are most qualified.<sup>98</sup> Again, large groups do better, because they permit finer differentiation of sub-tasks and make more likely a close match between member skills and tasks.

Conjunctive tasks are those where every member of a group must perform correctly to ensure the success of the whole group.<sup>99</sup> Here, groups will be at a disadvantage (and the larger the group, the worse the disadvantage), because they will perform at the level of their worst, not their average or best, member. To the extent that juries require a consensus that can be blocked by the response of one, or a small handful of members, they face the disadvantages of a conjunctive task.

Disjunctive tasks are those where the best response counts as the group response.<sup>100</sup> Here, groups are at a decided advantage over individuals, because the more individuals participating the greater the probability of a correct answer. Occasionally, at least, jury deliberation can have this character, inasmuch as one juror may enlighten the rest. Disjunctive tasks can be divided into those where the best individual response automatically counts for the group, and those where it will do so only if adopted by the others.<sup>101</sup> Obviously, the most enlightened response of individual jurors will "count for the group" only if the group adopts it. An interesting question is the extent to which the tasks faced by the jury are ones where the best or correct response, if given by one member, will immediately be recognized as such by the others. Later we intend to discuss the extent to which the elimination of bias presents jurors with this kind of "Eureka" task.<sup>102</sup>

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96. Steiner, *Task-Performing Groups*, in CONTEMPORARY TOPICS IN SOCIAL PSYCHOLOGY 393 (J. Thibaut, J. Spence, & R. Carson eds. 1976).

97. *Id.* at 403-04.

98. *Id.* at 407-09.

99. *Id.* at 406.

100. *Id.* at 405.

101. See Shaw, *A Comparison of Individuals and Small Groups in the Rational Solution of Complex Problems*, 44 AM. J. PSYCH. 491 (1932).

102. See text accompanying note 174 *supra*.

One area in which a “Eureka” effect might be expected is the simple recall of the evidence presented: the fallible memories of individual jurors should be improved by group discussion. A correct recollection is likely to be recognized as such, because relatively little time will have elapsed since trial and the jurors will have been exposed to the evidence under the same favorable viewing conditions. In the 1930’s, J.F. Dashiell conducted a series of experiments in which he staged a dramatic event in front of witnesses, had those witnesses “testify” about the event to a jury, and then compared the completeness and accuracy of the reports from witnesses, individual jury members, and the unanimous juries. His results were encouraging:

After the jurors had discussed the testimony among themselves, the net unanimous report was clearly *less complete* . . . but clearly *more accurate* than that of any individual witness or individual juror. Apparently, the unanimity requirement affected the results of group-discussion by reducing the range of individual suggestions as accepted, but this operated especially to cut down the erroneous items.<sup>103</sup>

In a 1969 review of group problem-solving literature, Kelley and Thibaut cite several other studies confirming that groups did significantly better than the average, and often the best, individuals on recall tasks.<sup>104</sup> Further, this improvement appears to have been mediated by a “Eureka” effect. They quote one researcher’s observation: “[W]hen one member suggests a correct segment, other are likely to ‘recognize’ it even though they were unable to recall that particular portion of the story when they were working alone.”<sup>105</sup> These results are helpful to the accounts of group deliberation discussed later, the assumption being that the jury’s discussion will be representative of the evidence presented at trial. We should note in anticipation, however, that none of the problem-solving tasks cited here presented group members with the kind of temptation to distort the evidence that may confront real jurors.

### B. *The Group Polarization Phenomenon*

For most of the brief history of modern social psychology, it was thought that the primary effects of group decision-making on individual participants were conformity to the majority or prevailing opinion, and a general inertia and conservatism.<sup>106</sup> The adherence of individuals to the majority position was suggested in classic experiments by Sherif and Asch, both of whom showed individuals altering simple

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103. Dashiell, *supra* note 6, at 1136-37.

104. Kelly & Thibaut, *Group Problem Solving*, in 4 HANDBOOK SOC. PSYCH. 1, 65-68 (1969).

105. *Id.* at 67.

106. See, e.g., Barnlund, *A Comparative Study of Individual Majority and Group Judgment*, 58 J. ABNORMAL & SOC. PSYCH. 55 (1959).

perceptual judgments to accord with those made by other participants.<sup>107</sup> These experiments raised a continuing debate over whether the changed judgments were due more to the social pressure exerted or to the information yielded by the group, and the related question of whether the participants displayed mere public conformity or enduring attitude change.<sup>108</sup> As we intend to show, these are recurring issues in the study of group influences. The other quality which was thought to pervade group decision-making was a cautiousness and resistance to change exceeding that of the individual members. This aspect of groups was revealed less by research than by contemporary social commentary, which viewed the Organization Man and the Committee as bulwarks of inertia.<sup>109</sup>

It was a pleasant surprise, then, and the kind of unexpected discovery that convinces social scientists of their professional worth, when the systematic comparison of individual and group preferences revealed neither simple conformity nor increased conservatism. In the early 1960's, researchers found that individuals, after having discussed the decision in groups, favored *riskier* courses of action in hypothetical situations.<sup>110</sup> Originally, this effect was thought to be limited to the exaggeration of a preference for risk. It was labelled "the risky shift," and initially was thought to result from the diffusion of responsibility in groups.<sup>111</sup> It has since been discovered, however, that many values that are initially favored by a majority of group members will be more strongly endorsed after group discussion.<sup>112</sup> A shift toward a more extreme position in groups, then, is not merely confined to a preference for risk. In a 1976 review, Myers and Lamm cited reports that group discussion polarized initial positions on political leaders, civil disobedience, pacifism, capital punishment, charitable contributions, faculty evaluation, demographic estimates, and jury decisions on guilt and punishment.<sup>113</sup> In certain choice situations, researchers found a pro-

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107. Asch, *Effects of Group Pressures on Modification and Distortion of Judgments*, in READINGS IN SOCIAL PSYCHOLOGY 174 (E. Maccoby, T. Newcomb, & E. Hartley eds. 1958); M. SHERIF, *THE PSYCHOLOGY OF SOCIAL NORMS* (1936).

108. These distinctions were raised and addressed experimentally by Deutsch & Gerard, *A Study of Normative and Informational Social Influences Upon Individual Judgment*, 51 J. ABNORMAL & SOC. PSYCH. 629 (1955).

109. See, e.g., W. WHYTE, *THE ORGANIZATION MAN* (1956).

110. The discovery was first made by J. Stoner, *A Comparison of Individual and Group Decisions Involving Risk* (1961) (unpublished master's thesis at Massachusetts Institute of Technology).

111. Wallach, Kogan, & Bem, *Diffusion of Responsibility and Level of Risk Taking in Groups*, 68 J. ABNORMAL & SOC. PSYCH. 263 (1964). The experimental "track record" of this account is reviewed in Dion, Baron, & Miller, *Why Do Groups Make Riskier Decisions than Individuals?*, 5 ADVANCES EXPERIMENTAL SOC. PSYCH. 305 (1970).

112. The generalization of the group shift was proposed by Moscovici & Zavalloni, *The Group as a Polarizer of Attitudes*, 12 J. PERSONALITY & SOC. PSYCH. 125 (1969).

113. Myers & Lamm, *supra* note 91, at 604-10.

nounced conservative, rather than a risky, shift.<sup>114</sup> Although the polarizing of initial positions has not been demonstrated consistently in the area of risk preference and has failed to appear at all in other settings,<sup>115</sup> it is clearly a much broader phenomenon than originally believed. Having been shown to affect a variety of value judgments besides risk, the extremity shift has been more aptly termed "group polarization." The diffusion-of-responsibility account, tailored to risk, has lost much of its appeal, opening the way for several broader explanations.<sup>116</sup>

The most "economical" account treats the apparent polarization of initial positions as no more than the result of adopting a social decision rule.<sup>117</sup> The members of the deliberating group agree, explicitly or implicitly, to go along with the preferences of a majority, two-thirds, or some other fraction of its members.<sup>118</sup> Even without any attitude change, the adoption of such a rule will often make collective decisions more extreme than individual ones.<sup>119</sup> But as Myers and Lamm point out, this statistical explanation can hardly give a complete account of the group polarization effect.<sup>120</sup> Even if correct, it would leave unexplained why individual positions, as well as the group decision, shift toward the dominant pole after discussion, and remain polarized when discussion is over. Further, this polarization has occurred even when members have lacked the opportunity to combine their positions by a social decision rule. Myers and Lamm cite evidence that the account fails even as a partial explanation: a review of several studies shows that the initial distributions which should lead to more extreme group decisions under the various decision rules do a poor job of predicting the polarization actually found.<sup>121</sup>

The inadequacy of the statistical account allows us to consider two more familiar and more congenial explanations, encountered first in the debate over the findings of conformity research. Shifts in individual preference may occur (1) because it is socially desirable to adopt a more extreme position, or (2) because group discussions generate information favoring a more extreme position. Much recent debate has fo-

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114. See, e.g., Zaleska, *Majority Influence on Group Choices Among Bets*, 33 J. PERSONALITY & SOC. PSYCH. 8 (1976).

115. Myers & Lamm, *supra* note 91, at 608-10.

116. *Id.* at 603. See also Moscovici & Zavalloni, *supra* note 112.

117. Myers & Lamm, *supra* note 91, at 609.

118. For a more detailed discussion evaluating these and more complex social decision rules, see Penrod & Hastie, *Models of Jury Decisionmaking: A Critical Review*, 86 PSYCH. BULL. 462 (1980).

119. *Id.*

120. Myers & Lamm, *supra* note 91, at 611-13.

121. *Id.* at 612-13.

cused on the merits and compatibility of these two approaches.<sup>122</sup>

The account of group polarization in terms of social desirability has at least two variants: one involves values that are strongly but “covertly” held; the other concerns publicly approved values.<sup>123</sup> In the former, individuals who have subdued or understated their individual preferences in conformity with some external norm find that the other members of the group share the suppressed value, a discovery that releases them from the external constraints.<sup>124</sup> This “liberation” effect will be the subject of discussion in our analysis of experiments that have shown a heightened effect of extra-legal influences following deliberation.

The second variant (sometimes called “the value hypothesis”)<sup>125</sup> involves an approved value such as generosity or fairness, which individuals prefer to think they hold at least as strongly as their peers. Group discussion may reveal to them that they are not manifesting this value with the comparative strength they had supposed, and thus will cause a revision of their preference or decision so as to express it more strongly. It should be noted that this effect, while due to social influence, is not a simple matter of public conformity. The individual member who revises his position upward does not merely wish to *appear* more skeptical, militant, or risky; he wants to *be* more skeptical, militant, or risky. If he revises his position to achieve that goal, he is unlikely to revert after discussion has ended.

Another series of explanations focuses on the informational effects of group interaction. They share the claim that the shift in individual positions occurs because discussion will generate more, or more persuasive, arguments in the dominant direction.<sup>126</sup> Quite apart from social influence, initial positions move toward the extreme because the group presents more and better reasons for that position than the individuals would provide for themselves. Most proponents of this view concede that the persuasive edge enjoyed by the dominant value may depend on social influence in a variety of ways.<sup>127</sup> It has been shown that the

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122. See generally Miller, *A Questionnaire in Search of a Theory*, in *GROUP PROCESSES* 301 (L. Berkowitz ed. 1978).

123. *Id.* at 303-04.

124. *Id.* at 303.

125. Actually, there are several versions of the “admired value” account, differing in the emphasis they place on public appearance or “self presentation.” *Id.* at 303-04. A review of the value hypothesis, perhaps the most complete account of group polarization, may be found in Dion, Baron, & Miller, *supra* note 111.

126. Myers & Lamm, *supra* note 91, at 616.

127. *Id.* at 618-19. Myers and Lamm find the evidence for informational influence “compelling,” but insist that a complete account must explain the social motivation underlying that influence.

more extreme members are the most admired,<sup>128</sup> making the others more receptive to their arguments. Some research indicates that the more extreme members may be perceived as more sincere or competent.<sup>129</sup> Myers and Lamm suggest that the members of the group may tailor their comments to fit the dominant tendency they perceive in order to present themselves favorably. Once made, however, the arguments acquire a force of their own. In presenting and listening to them, the members of the groups are rationally persuaded to adopt a more extreme position than they previously held.<sup>130</sup>

The integrated approach of Myers and Lamm is probably favored by most current researchers.<sup>131</sup> Experiments have repeatedly shown that both value comparison and information exchange bring about polarization, and neither has been convincingly shown to be dispensible in that process.<sup>132</sup> In the discussion that follows, we assume that in at least some settings both types of influences play a role.

A quite different cognitive explanation for polarized attitudes comes from information integration theory (hereinafter referred to as IIT). IIT is an attempt to give a general account of how diverse information bearing on a particular issue is incorporated into a final "verdict."<sup>133</sup> It treats all matters considered by the decision-maker as having two components: scale value—how informative the item is on the issue in question, and weight—how important, salient, or trustworthy the item is. Although this distinction is not drawn clearly or consistently, it is useful in approaching evidence combinations.<sup>134</sup> IIT makes an important

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128. See, e.g., Jellison & Riskind, *A Social Comparison of Abilities Interpretation of Risk Taking Behavior*, 15 J. PERSONALITY & SOC. PSYCH. 375 (1970).

129. See, e.g., Eisinger & Mills, *Perception of the Sincerity and Competence of a Communicator as a Function of the Extremity of His Position*, 4 J. EXPERIMENTAL SOC. PSYCH. 224 (1968), cited in Myers & Lamm, *supra* note 91, at 414.

130. *Id.* at 418-20.

131. Miller, *supra* note 122, at 309.

132. *Id.* at 305-08.

133. See Kaplan & Kemmerick, *Juror Judgment As Information Integration Combining Evidential and Nonevidential Information*, 30 J. PERSONALITY & SOC. PSYCH. 493 (1974).

134. At times, the distinction seems to be similar to one made by mathematical psychologists between the *diagnosticity* of a piece of information—the extent it is seen by the subject as favoring one hypothesis over another, and the *salience* of the information—how prominent or memorable it is for the subject. See, e.g., Wallsten, *Processing Information for Decisions*, in 2 COGNITIVE THEORY 87, 90-92 (Castellan, Pisoni, & Potts eds. 1977). Kaplan and his colleagues, however, treat the credibility of a source as affecting the weight, and not the scale value, of the information. Kaplan & L. Miller, *infra* note 136. This appears to be an oversimplification because subjects do make adjustments in probative value with changes in credibility, although these adjustments are consistently too small. See Schum, *supra* note 95. Elsewhere, Myers and Kaplan state that normative social pressure in groups affects the weight of the information, and informational influence affects its scale value. Myers & Kaplan, *Group Induced Polarization in Simulated Juries*, 2 PERSONALITY & SOC. PSYCH. BULL. 66 (1976). This analysis is puzzling in light of Kaplan's later claim that deliberation does not affect the scale value of the evidence. See text accompanying note 145 *infra*. In the following discussion, we treat weight and scale value as corresponding to



claim about the way in which information is combined: that the weight of all the information is averaged, so that the more information there is, the less the effective weight of any particular item. For this reason, the effective weight of an item depends on its weight relative to the other items under consideration, and on the number of other items being considered.<sup>135</sup>

It is important to note that this account would predict polarization toward a particular extreme only when the scale value of the evidence was closer to that extreme than was the initial disposition. If, instead, the initial disposition favored a result more strongly than the evidence, IIT would predict group depolarization, with the jury moving closer to the less extreme scale value of the evidence.

Kaplan and L. Miller<sup>136</sup> show how this weighted averaging model of information integration yields a simple account of the polarizing effect of group discussion. They begin with the assumption that the pre-deliberation positions of the members will frequently reflect a combination of arguments tending in one direction, and an initial bias or predisposition tending toward neutrality or the opposite direction.<sup>137</sup> The effect of deliberation is to increase the weight of the arguments, thereby reducing the moderating effect of the initial disposition. This notion can be illustrated by its application to the jury:<sup>138</sup> its members begin with a predisposition toward the case. This may be a posture of studied neutrality, or it may reflect bias or partiality. All that is necessary is that this initial disposition pull the jurors away from the direction of the evidence. Consequently, before deliberation the juror's position is a weighted combination of the evidence presented and his initial disposition, in combination less extreme than the evidence alone. What deliberation does is to increase the weight of the evidence, thereby giving comparatively less weight to the neutral or antagonistic initial disposition. Thus, polarization occurs.

Kaplan and his colleagues have tested in several interesting ways their hypothesis about the debiasing effect of jury deliberation. In one experiment,<sup>139</sup> jurors were asked to compose and exchange notes listing the five facts about the case they regarded as most influential. These notes were intercepted, and each juror received a note with either the same proportion of guilty/not guilty facts that he had submitted, or the

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diagnosticity and salience, giving them their most frequent, and certainly their most useful, meaning.

135. Kaplan & Kemmerick, *supra* note 133.

136. Kaplan & L. Miller, *A Model of Cognitive Processes in Jurors*, 10 REPRESENTATIVE RESEARCH SOC. PSYCH. 48 (1979).

137. *Id.* at 54.

138. *Id.*

139. Kaplan, *Discussion of Polarization Effects in a Modified Jury Decision Paradigm: Informational Influences*, 40 SOCIOMETRY 262 (1977).

opposite proportion. Not surprisingly, the latter opposite-proportion jurors moved toward a more moderate position than they had previously held. What is of interest is that the jurors who received facts in the *same* proportion as those they had listed shifted to more extreme positions. Kaplan and L. Miller view this as a debiasing effect, arguing as follows:

If *pre*-deliberation judgments had been based solely on the evidence, no shift should have occurred. That there was a shift supports the notion that a more neutral value (the initial impression) is being utilized in judgment and that its effect is being reduced by the additional information . . . integrated as a consequence of deliberation.<sup>140</sup>

A further experiment<sup>141</sup> suggested that it is not mere repetition, but the sharing of different perspectives on the information presented at trial, that causes the evidence to assume greater importance. Homogeneous juries were composed of members who had heard the evidence in the same order; heterogeneous juries included members who had heard two different sequences, and thus presumably had different facts salient to them. The judgments of heterogeneous juries shifted more, indicating the greater impact of non-redundant information. For the experimenters, presenting the evidence in different orders was a way of operationalizing the diverse information actually salient to jurors as a result of differences in attention, memory, and information processing:

Over the course of a long and involved trial, given all the inherent distractions in the courtroom, all facts may not be equally memorable, nor will all jurors remember the same facts when they integrate them into predeliberation judgments. It remains for deliberation to reintroduce facts memorable to other jurors for subsequent integration into the judgment.<sup>142</sup>

This explanation finds independent support in the previously cited work of Dashiell and others,<sup>143</sup> which showed that the group's accuracy in recalling both events and testimony about events consistently surpassed that of its individual members. These studies suggest that even if deliberation does not always increase the supply of facts available to the participants, it does present the facts with slightly differing recollections and sharpens participants' memories of the evidence presented.

The appeal of Kaplan and L. Miller's explanation lies partly in its economy; like the social-decision-rule account, it explains the extremity shifts without invoking a special polarization process. All that is necessary is that the members of the group discuss the evidence presented, increasing its preponderance over their unarticulated initial disposi-

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140. Kaplan & L. Miller, *supra* note 136, at 55.

141. Kaplan & L. Miller, *Judgments and Group Discussion: Effects of Presentation and Memory Factors on Polarization*, 40 *SOCIOMETRY* 337 (1977).

142. *Id.* at 342.

143. *See* notes 103-04 *supra*.

tions. Unlike other cognitive accounts, IIT does not claim that group members slant their arguments in the dominant direction.<sup>144</sup>

The only "values" or "tendencies" that IIT needs to consider are the scale value (or probativeness) and the weight (or importance) of the information received. The claim of IIT is simply that group decisions will reflect this scale value more closely after deliberation, while any other values affecting initial judgments will decline in importance.<sup>145</sup>

Kaplan's account makes two major assumptions in predicting that deliberation will consistently reduce bias. First, it is premised on the self-restraint of the jury: if juries routinely discuss the biasing factors as well as the evidence, the comparative importance of the evidence may not increase. Second, it assumes that discussion of the evidence will not change its scale value significantly, even though in the cases of greatest interest the jurors will enter deliberation with strong biases in the opposite direction.<sup>146</sup> If these factors distort the evidence by one of the processes we have discussed above, deliberation may serve to move the jurors' responses *away* from the response dictated by the evidence, and toward greater bias.

Of the two assumptions, the second is more critical. The first merely limits the prediction of reduced bias to well-behaved jurors. The second assumption is necessary even for disciplined juries. If the evidence is vulnerable to distortion by opposing biases, deliberation may indirectly amplify their effect even if they are never discussed. In the next

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144. Myers & Lamm, *supra* note 91, at 616-17, comment on a division among informational accounts between those which try to predict the extent of polarization merely by the *direction* of the arguments generated in group discussion (that is, which alternative they favor) and those which insist that the persuasiveness and originality of the arguments must be taken into consideration. These latter accounts would predict a shift in the scale value as well as the weight of the argument, because polarization will have been achieved by more persuasive and original arguments on the dominant side.

145. Actually, IIT does not claim that deliberation increases the *weight* of particular items of evidence, but that it increases the *number* of items available to each juror, and that this enlarged set has the same scale value as the jurors' smaller pre-deliberation sets. Kaplan, *supra* note 139, at 269. This enlargement causes an increase in the total weight of the evidence relative to the initial disposition. For convenience, then, we will continue to speak of IIT as predicting an increase in the *weight* of the evidence through deliberation.

146. "Individuals enter discussion with a judgment reflecting the prevailing tendency of information, but not as extreme. Subsequent discussion, *provided it is similar in value to the original information base*, increases the information integrated by the individual, offsetting the more neutral initial impression and thereby polarizing the post-discussion response." *Id.* (emphasis added). The proviso that the scale value of the information remain the same is not necessary to account for polarization. See note 144 *supra*. It becomes critical when the account is applied to jury decision-making. If deliberation is to make juror judgments conform to the prevailing tendency of the evidence, discussion must not alter the scale value of that evidence in *either* direction. If deliberation were to cause the scale value to shift even further from the initial predispositions of the jurors, it might result in an "overcompensation," with the resulting verdict being more extreme than the evidence warranted.

two sections, we will review research that suggests the possibility of this kind of distortion.

#### IV. WHAT VALUES WILL BE HEIGHTENED BY GROUP DELIBERATION?

IIT makes a simple and optimistic prediction about the effect of group deliberation on extra-legal influences: group deliberation will reduce the impact of extra-legal influences by diminishing their comparative importance. In contrast, the other accounts of group polarization previously discussed make no such general claim. Whether the putative source of polarization is value comparison or information exchange, an extra-legal influence will be amplified only if it represents a dominant value in the group, and then only if that dominant value will be strengthened by group discussion. IIT attempts to avoid these complications by maintaining that the only value magnified by deliberation is the tendency of the evidence itself to support one side or the other. If this simplified assumption proves to be untenable, and we argue that it is, the researcher attempting to predict the effect of deliberation on a particular type of non-evidentiary influence must address two threshold questions. First, what is the dominant attitude of the group with respect to this extra-legal factor? Second, is this attitude one likely to be polarized by group discussion? Both questions raise serious difficulties in the application of laboratory research on groups to a field setting.

How does one determine in advance what will be the dominant tendency for a particular value? In the laboratory research on group polarization, the dominant response has been determined either by averaging the individual responses on some quantitative scale,<sup>147</sup> or by manipulating the choice situation faced by the subjects so that a particular response or value is almost certain to be dominant.<sup>148</sup> Using the first approach, the researcher locates the mean response of individual subjects on a questionnaire item such as: "How strongly do you favor nuclear disarmament?" (on a 1-9 scale) or "What must the odds in favor of success be before you would advise this?" (from 1-in-10 to 10-in-10). If the mean individual response exceeds the midpoint in one direction, the post-deliberation responses should extend even further in that direction. The problem is that the mathematical mean (for example, 5.5 chances in 10) may not correspond to the psychological midpoint; the felt point of neutrality on a continuum between opposed values such as risk and caution.<sup>149</sup> One alternative would be to define

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147. Myers & Lamm, *supra* note 91, at 603-04.

148. *Id.*

149. *Id.*

the psychological midpoint as that point beyond which responses will polarize in either direction. While this definition is meaningful (because it does predict consistent polarization, depending on the location of the initial mean with respect to that point), it deprives the account of predictive power: before the group starts to deliberate, there is no way to know where that point falls; hence, there is no way of predicting the direction in which the initial positions will shift.<sup>150</sup> One final strategy is suggested by S. F. Sonaike,<sup>151</sup> who found much sharper divergence between jury damage awards than between initial individual judgments in a mock negligence trial. She found that groups whose members initially favored awards higher than the overall individual mean tended to polarize upward; those with lower than average initial means tended to polarize downward.<sup>152</sup> But there were several striking exceptions, and this technique has clear limitations. On many issues, groups have been shown to polarize consistently in the same direction,<sup>153</sup> suggesting that the dominant pole is the same for all groups, whether their individual means are above or below average.

By designing the choice situation to elicit a dominant tendency, the second approach tries to ensure that individual responses will fall closer to one extreme.<sup>154</sup> In studies specifically applying group polarization to jury decisions, this preference-rigging has been achieved by presenting a pre-tested case strongly favoring one side or the other,<sup>155</sup> or by selecting jurors for their strong predispositions toward case-relevant values like authority, punishment, or crime.<sup>156</sup> In both types of jury polarization studies, a striking post-discussion amplification of individual or group responses has been consistently demonstrated.

While these are interesting findings, their applicability to real juries is severely limited by several considerations. First, the adversary system of jury selection almost guarantees that the jurors chosen will have no dominant predisposition concerning the case. Second, the cases that we are concerned about are those on which judges and juries diverge. As indicated in the discussion of *The American Jury*, these are generally close cases.<sup>157</sup> Thus, the choice situation that juries face in the cases that concern us here will not, in contrast to the experimental materials, have a strong tendency to favor one side or the other. If

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150. *Id.*

151. Sonaike, *The Influence of Jury Deliberation on Juror Perception of Trial, Credibility, and Damage Awards*, 1978 B.Y.L. REV. 889.

152. *Id.* at 902.

153. Many examples of consistent polarization on specific issues are cited by Myers & Lamm, *supra* note 91, at 604-05.

154. *Id.* at 604.

155. *Id.* at 606.

156. *Id.*

157. H. KALVEN & H. ZEISEL, *supra* note 7, at 149-62.

group polarization occurs in close cases with significant extra-legal influences, it will rarely take effect simply by heightening an already strong tendency to convict. Especially when there is no prevailing sentiment on guilt per se, a broader question arises: What values and response-tendencies on the part of individual jurors will be subject to group polarization?

Research applicable to this second question is not readily available. Studies of group polarization have generally presented groups with a choice along a single value continuum. In the original choice dilemma questionnaires, the decision was limited to choosing one of ten levels of risk in various hypothetical situations.<sup>158</sup> In more recent experiments, the choice may have allowed for a broader range of considerations, but disagreement was still largely confined to differences along a single dimension: pacifism vs. militarism, negative vs. positive faculty appraisals, generosity vs. frugality.<sup>159</sup>

An actual decision about guilt or liability, however, does not involve one issue or value, but many. A host of preferences and judgments lies behind the initial votes that jurors cast: the assignment of probative value to specific pieces of evidence and to the evidence as a whole, general dispositions toward broad categories of evidence, sentiments toward the participants and the applicable laws, and differing probability thresholds for decision. The initial distribution of votes may result from any combination of such beliefs and response tendencies. The presence of even a strong majority will not necessarily reflect a single dominant value. Deliberation may in fact reveal to jurors that they share a verdict preference for reasons they find mutually unacceptable.

As previously shown, IIT deals with this multiplicity of values by assuming that deliberation will involve discussion about only one of them—the probative value of the evidence. It claims that deliberation will generally leave the scale value of the evidence unchanged, while greatly increasing its weight.<sup>160</sup> Other accounts impose no restrictions on the type or number of case-related values that may be polarized by group discussion.<sup>161</sup> Before questioning the simplifying assumptions of IIT, it is appropriate to suggest the difficulties that an unrestricted polarization account must face.

Consider the previously cited study by Izzett and Leginski<sup>162</sup> on

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158. See Myers & Lamm, *supra* note 91, at 602.

159. *Id.* at 604-05.

160. See note 146 *supra*.

161. The "value hypothesis" and similar accounts (discussed in note 125 *supra*) require that the dominant tendency of the initial majority reflect a strong cultural value in order for polarization to occur, but this restriction is not very useful for prediction.

162. Izzett & Leginski, *supra* note 62.

group discussion and defendant attractiveness. The authors presented subject-jurors with the case summary used by Landy and Aronson.<sup>163</sup> One group of subjects read a description of the defendant as an attractive individual; the others read the extremely unflattering description quoted earlier in this article.<sup>164</sup> After reading the case material, each individual juror was asked to sentence the defendant to a prison term of between one and twenty-five years and to rate his guilt on a one-to-nine point scale. At this stage, the authors replicated Landy and Aronson's "attractiveness effect": the unsavory defendant was sentenced to significantly more years than the upstanding one.<sup>165</sup> The guilt ratings were uniformly high. Apparently, the case description left no doubt about the defendant's criminal negligence.<sup>166</sup> Subjects were then assigned to groups in which they were to announce their sentence, state their reasons, and then freely discuss the case. After this session they again responded to questions on sentencing and guilt.

As a result of polarization, what differences in the post-deliberation responses would be expected? Any number of effects might reasonably be predicted. Perhaps the most likely result would be a further divergence between the two defendants, with the attractive one getting an even lighter, and the unattractive one an even harsher, sentence. This outcome would be expected on either of two grounds. Discussion might "liberate" jurors from the "external norm" of impartiality, allowing them to give fuller expression to their sympathies and aversions.<sup>167</sup> Alternatively, more persuasive arguments for low and high sentences might be expected in the cases of attractive and unattractive defendants, respectively.<sup>168</sup>

In fact, Izzett and Leginski found that the post-deliberation sentences for the unattractive defendant *declined* significantly, while those for the attractive defendant remained roughly the same. As a result, there was no significant difference in the post-deliberation sentences for the two defendants.<sup>169</sup>

These results are consistent with IIT, which would have predicted at least some convergence on the sentences. The core of evidence relevant to sentencing differed less than did the totality of information about the two defendants. Thus, a discussion of the *evidence* would be expected to reduce differences in sentences for the two defendants by giving

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163. Landy & Aronson, *supra* note 38.

164. See text accompanying note 49 *supra*.

165. Izzett & Leginski, *supra* note 62, at 275.

166. *Id.* at 276. This 'ceiling' effect would conceal any effect of attractiveness on guilt; therefore, it will not be discussed further.

167. See text accompanying note 124 *supra*.

168. See text accompanying notes 126-27 *supra*.

169. Izzett & Leginski, *supra* note 62, at 276.

greater weight to the common elements of their cases. The overlap would not be expected to be complete, however, because the evidence a jury could legitimately consider for sentencing would not be the same for the two: the defendants differed on age, employment, and criminal record, all considerations relevant to sentencing and likely to have been adduced in deliberation. The fact that only the sentence of the unattractive defendant changed could be explained in terms of the composition of the information about his case. It may be that the proportion of unfavorable information about the unattractive defendant that lacked sufficient relevance to merit discussion was much greater than the proportion of favorable information about the attractive defendant similarly excluded from discussion.

How do Izzett and Leginski themselves account for these results—results which would not appear to reflect polarization toward the dominant poles of the two cases? They suggest that the same value is being polarized in both cases—leniency.<sup>170</sup> But why should leniency have been a dominant value? The authors note that the mean individual sentence for both defendants was below the mathematical midpoint of twelve and one-half years.<sup>171</sup> As we have pointed out, however, the numerical mean may not correspond to the psychological point of neutrality; therefore, an initial position as close to the numerical midpoint as that for both defendants may not indicate a lenient disposition.<sup>172</sup> Izzett and Leginski offer an additional reason for expecting leniency to be a dominant value in both cases: “The Ss in this study were college students at a campus not far from the [recent] Attica prison riots. . . . Thus, it would seem reasonable to assume that the inadequacies of our penal system were salient. . . . If so, we could expect an evocation of a humanitarian or leniency attitude. . . .”<sup>173</sup> The ad hoc character of this explanation should be apparent. In both cases, a severity shift could have been explained equally well by the same events, especially if the campus were close enough to Attica for a large number of students to have had acquaintances among the prison staff.

Assuming that a leniency effect was present, why did it affect only the sentence of the unattractive defendant? Here, Izzett and Leginski draw from the literature on group problem-solving. They suggest a “Eureka” effect operating at the stage where subjects gave reasons for their individual sentences: “If the S verbalizes his attitude toward the defendant as a reason for his sentence, the group is likely to reject this reason as inappropriate.”<sup>174</sup> This is a more modest version of the claim

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170. *Id.* at 277.

171. *Id.*

172. See text accompanying note 149 *supra*.

173. Izzett & Leginski, *supra* note 62, at 278.

174. *Id.* at 273. Thus, the leniency shift was heightened for the unattractive defendant and



implicit in IIT: that inappropriate reasons for sentencing, such as the defendant's socioeconomic status or physical appearance, simply will not get raised in discussion. It shares a weakness that we will shortly explore—it does not deal with the possibility that considerations which are suppressed or dismissed will indirectly influence the discussion of the “admissible” evidence by one of the processes we have discussed in section II above.

The interplay of different values in jury decision-making suggested by Izzett and Leginski is raised most strikingly by cases in which an initial majority, although favoring one verdict, eventually reverses itself. Any polarization account which treats guilt or liability as a unitary value will have trouble with such cases: the group appears to pull away from the dominant tendency of its members. These cases pose a problem for IIT as well. Movement away from the initial majority would be predicted only if the initial disposition, far from being neutral, favored an outcome opposed by the evidence so strongly that it masked the direction of the evidence in initial judgments. A turnabout could occur only if deliberation *reversed* the comparative weights of evidence and initial bias, and this would require a fairly vigorous discussion. Unfortunately, there is no evidence that these reversals occur in cases with unusually strong initial bias or weak evidence.<sup>175</sup> Thus, cases of reversal raise doubts about IIT's assumption that only the dominant tendency of the evidence will be heightened by deliberation.

These problematic reversals occur with significant frequency in cases in which an initial majority favors conviction.<sup>176</sup> The relatively high incidence of turnabouts in these cases suggests that the critical shift occurs on a dimension largely ignored by polarization research, and unaccounted for by IIT: the threshold for decision, or in legal terms, the standard of proof. We have already suggested that extra-legal influences may affect the outcome of a case by altering the decision threshold. What we now consider is the possibility that the standard of proof in criminal cases may itself reflect a value likely to be strengthened by deliberation: the presumption of innocence.

The evidence for group shifts toward a higher standard of proof is mostly circumstantial. In both laboratory and field studies, the rate of reversal for initial majorities favoring conviction is appreciably higher

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depressed for the attractive defendant by the jury's rejection of character considerations that may have influenced individual judgments.

175. As noted in text at 21 *supra*, Kalven & Zeisel do not report the incidence of judge-jury disagreements or other indicia of bias for these cases of reversal. While the case used by Nemeth, *infra* note 180, appeared both to favor the prosecution (73% of the individuals reading it favored conviction) and to contain pro-defense bias (a suggestion that the defendant was a victim of adultery), it was not striking in either respect.

176. See H. KALVEN & H. ZEISEL, *supra* note 7, at 487-89; Nemeth, *infra* note 180.

than for initial majorities favoring acquittal.<sup>177</sup>

As noted earlier, Kalven and Zeisel found that actual juries with an initial majority favoring acquittal ended up convicting two percent of the time, while juries with an initial majority favoring conviction acquitted five percent of the time.<sup>178</sup> Juries initially favoring conviction and acquittal ended up “hung” nine percent and seven percent of the time, respectively<sup>179</sup>—a much less significant difference than their reversal rates. This latter finding may suggest that the higher frequency of turnabouts for initially pro-conviction juries is not solely a result of the greater stubbornness of pro-acquittal minorities.

The results of a recent experiment by C. Nemeth<sup>180</sup> offer further evidence of a conservative shift in criminal jury deliberations. Nemeth showed subjects a videotaped trial; then she selected juries based on individual opinions as to the defendant’s guilt. Six-person juries were formed in which either two or four of the members initially favored conviction, and the remaining members initially favored acquittal. Juries were required to reach a decision either by majority vote or by unanimity. Over one-half of the pro-conviction juries under both decision rules did not convict. In contrast, only one of the initially pro-acquittal juries shifted under each decision rule.<sup>181</sup>

Finally, Bray and Noble<sup>182</sup> discovered that when juries were selected for their authoritarian leanings, initial majorities for conviction reversed themselves two and one-half times as frequently as initial majorities for acquittal. These authoritarian juries continued to show the predicted shift to harsher punishment, indicating that the opposite trend in verdicts was due to a factor specific to guilt determination.<sup>183</sup> While the acquittal trend may be partly explained by the overall weakness of the case against the defendant—over half of the individual authoritarian jurors voted to acquit<sup>184</sup>—this feature cannot fully explain the reversal in juries where a majority did favor conviction.

The repeated finding that pro-conviction majorities are more reversal-prone suggests that such reversals result from a preference for a high conviction threshold, reinforced by group discussion. The members of a jury with an initial majority favoring conviction may largely agree on the probative value of the evidence, and differ only on the

177. See H. Kalven & H. Zeisel, *supra* note 7, at 487-89.

178. *Id.*

179. *Id.*

180. Nemeth, *Rules Governing Jury Deliberations: A Consideration of Some Recent Changes*, in *PSYCHOLOGY AND THE LAW* 169 (G. Bermant, C. Nemeth, & N. Vidmar eds. 1976).

181. *Id.* at 175.

182. Bray & Noble, *Authoritarianism and Decisions of Mock Jurors: Evidence of Jury Bias and Group Polarization*, 36 *J. PERSONALITY & SOC. PSYCH.* 1424 (1978).

183. *Id.* at 1427.

184. *Id.* at 1428.

probability of guilt that constitutes "proof beyond a reasonable doubt." In this situation a criminal jury is faced with a simple choice dilemma: what are the lowest odds of guilt for which you will vote to convict? When the issue before the jury resolves itself into a question about conviction thresholds, a strong preference for caution and skepticism should come into play. This preference has been inculcated by the jurors' legal socialization, and has been reinforced by emphatic instructions on the presumption of innocence.<sup>185</sup> The value placed on caution may express itself without explicit discussion, however. The tasks of evaluating the evidence and setting a standard of proof are closely intertwined, and the preference for a higher threshold may express itself in a more critical review of the state's evidence, or an increased willingness to give the defendant "the benefit of the doubt."

After a close analysis of the evidentiary disagreements between judges and juries, Kalven and Zeisel concluded that eleven per cent of these differences arose because the jury adopted a stricter standard for proof beyond a reasonable doubt.<sup>186</sup> They suggested an explanation for this higher conviction threshold, "beyond the likelihood that it reflects a distinctive value held by laymen":

Given the ambiguity of the reasonable doubt formula, it is likely that it is not understood in the same fashion by all jurors; hence, one could theoretically rank a population of jurors in terms of their thresholds of reasonable doubt. . . . If then the group of [twelve] jurors decides close cases with a higher cut-off point than does a single judge, the explanation may reside simply in the unanimity requirement. The jury, to avoid disagreement would tend in the direction of its most stringent member.<sup>187</sup>

But the jury would tend in this direction just because stringency is a shared value, to which the more conviction-prone members would defer.

Writing at a time when group shifts were still thought to be limited to risk, Kalven and Zeisel ventured an account of the jury's higher conviction threshold in terms of a *conservative* shift in group deliberation. An open-ended polarization account like Izzett and Leginski's could accommodate this finding merely by adding to the list of values affected by deliberation. For IIT, the consequences of this finding are more serious. It cannot be easily accounted for in terms of variable weight and scale value. A decision threshold is not part of the information that jurors must integrate, to be later emphasized or ignored in deliberation. Rather, it is a standard brought to bear (at least in theory) after the information has been integrated. Although this standard

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185. See Ostrom, Werner, & Saks, *supra* note 81.

186. H. KALVEN & H. ZEISEL, *supra* note 7, at 187.

187. *Id.* at 189.

of proof may express itself in the manner in which the evidence is evaluated, this hardly helps IIT to account for its polarization. If a higher standard of proof is reflected in a harsher evaluation of the evidence, then deliberation has affected the scale value of the evidence as well as its weight, contrary to the basic assumption that IIT makes about the accuracy of deliberation.

V. EXTRA-LEGAL FACTORS AND GROUP DELIBERATION

We now turn directly to the assumption that deliberation preserves the scale value of the evidence, from which the IIT account of bias-reduction acquires its appealing simplicity.<sup>188</sup> A review of the various forms of extra-legal influence outlined above<sup>189</sup> should raise doubts about the extent to which group discussion can be insulated from legally irrelevant considerations.

Before citing experiments which challenge the assumption that deliberation is bias-resistant, we should consider the evidence adduced in support of that claim. Several experiments cited above indicated that group discussion leads to greater accuracy in evidence recall.<sup>190</sup> None of these studies, however, required jurors to wrestle with strong predispositions about the case they were reviewing. Until it is shown how juries hold up against the systematic distortion of biasing factors, as well as the vagaries of individual recall, there can be no confidence that deliberation will preserve the scale value of the evidence in normal trial conditions.

Kaplan claimed that several experiments done by himself and others put jurors to this test, and that they held up rather well.<sup>191</sup> In each of these experiments, groups of jurors were either selected for, or manipulated to have, opposing biases. Their individual judgments were elicited before and after deliberation, or with or without some other measure thought to reduce bias. The groups with opposing biases were expected to differ sharply before, or in the absence of, this measure. Kaplan assumed that a convergence in the responses of the two groups following the supposedly bias-reducing measure indicated a shift away

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188. See text accompanying note 146 *supra*.  
 189. See text accompanying notes 68-85 *supra*.  
 190. See Dashiell, *supra* note 6, at 1136-37; Kelly & Thibaut, *supra* note 104.  
 191. Kaplan & L. Miller, *supra* note 136, at 50-53. Indirect support for the objectivity of deliberation can be found in Kaplan & Kemmerick, *supra* note 133, at 498, where it was shown that "a negatively evaluated defendant biases judgment against himself whether the evidence is incriminating or exonerating, and to the same extent." It appears that the character information was combined non-interactively with the case evidence, which suggests that it had no effect on the way the admissible evidence was evaluated. If the character evidence were shaping the evaluation of the evidence, one might have expected an interaction between the type of bias and the type of evidence. Thus, the evaluation of the admissible evidence by non-deliberating jurors appears not to be affected by this kind of bias.

from bias and toward the value of the evidence, which was identical for both groups. Bias was introduced in different ways: by obnoxious conduct on the part of one of the attorneys (or the judge),<sup>192</sup> by exposing the jurors to incriminating pre-trial publicity,<sup>193</sup> and by selecting jurors who were either very high or very low on a scale of authoritarian attitudes.<sup>194</sup> The bias-reducing manipulating also varied: for the jurors varying in authoritarianism, it was a statement affirming the reliability of the evidence; for the jurors exposed to pre-trial publicity, it was the presentation of the case itself; and for jurors subjected to courtroom misconduct, it was the opportunity to deliberate. Each of these measures was expected to heighten the importance of the evidence and thereby reduce the comparative importance of the biasing factor.

Although the predicted convergence in the responses of the two groups was found in all three experiments, indicating a reduction of bias, these results provide only weak evidence for the objective character of deliberation. In the one experiment actually utilizing deliberation to increase the salience of the evidence, the only competing influence was attorney misbehavior.<sup>195</sup> Not surprisingly, deliberating jurors were able to disregard their irritation, but this says little about their ability to resist more powerful extra-legal influences. The findings on the reduced impact of pre-trial publicity and authoritarianism might seem even more encouraging. Those potentially strong biasing factors were effectively neutralized by measures which merely increased the salience of the admissible evidence. But these results must be viewed with caution.

First, deliberation itself was not the bias-reducing measure. Second, the measures employed—presentation of the case, and assurance of reliability—did not have the same potential as deliberation to distort, as well as to highlight, the evidence. Finally, enhanced reliability may have reduced the effect of bias, not by increasing the weight of the evidence, but by discouraging its distortion. Kaplan and L. Miller concede that their results permit “[a] tenuous implication” that “when evidence is questionable, persons . . . will discount information inconsistent with their bias.”<sup>196</sup> Their findings may thus be fully consistent with the conclusion of Ostrom, Werner, and Saks that the effect of bias is found in the differential evaluation of the evidence.<sup>197</sup> But if bias

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192. Kaplan & L. Miller, *Reducing the Effects of Juror Bias*, 36 J. PERSONALITY & SOC. PSYCH. 1443 (1975) (experiment 3).

193. L. Zanzola, *The Role of Pretrial Publicity in the Trial Process and Jury Deliberation* (1977) (unpublished study at Northern Illinois University).

194. Kaplan & L. Miller, *supra* note 192, at 1444-50 (experiments 1 & 2).

195. *Id.* at 1450-54 (experiment 3).

196. *Id.* at 1448-49 (experiment 2).

197. See Ostrom, Werner, & Saks, *supra* note 81 & text accompanying note 211. Kaplan and Miller claim that this alternative explanation is plausible only for experiment 2, where there were

cannot be "localized in [an] initial impression"<sup>198</sup> that will fade with inattention, deliberation will not necessarily reduce its impact.

Even if the above experiments support the claim of objectivity in deliberation, other studies have obtained less encouraging results. Numerous experiments have shown that restrictive instructions may backfire, and thus magnify the influence of factors that jurors have been exhorted to ignore.<sup>199</sup> This effect has been found for deliberating groups, as well as for non-deliberating, individuals. The first study to reveal this boomerang effect was probably one done by Broeder for the Chicago Jury Project.<sup>200</sup> Broeder compared the damage awards of juries that never learned of the defendant's liability insurance with both those that received this information without restrictive instructions and those that were instructed *not* to consider it in their deliberations. The last group of juries gave significantly higher awards than the uninstructed, as well as the uninformed, juries. Recently, Oros and Elman found that jurors deliberating in groups and rendering individual judgments were harsher in convicting and sentencing after being given specific instructions to "decide on the disputed facts without regard to [the unfavorable] non-evidential aspects of the defendant."<sup>201</sup>

There are at least two reported studies in which deliberating juries appeared to be influenced by extra-legal factors *more* than individual jurors. We have already discussed Hans and Doob's finding that the defendant's record affected group, but not individual, verdicts.<sup>202</sup> McGuire and Bermant conducted a study in which they found that jurors increased the harshness of their verdicts during deliberations following a trial with a female defense attorney.<sup>203</sup> The increased harshness created a sex-of-attorney effect for juries that had not appeared in individual judgments.

When group deliberation preserves or magnifies the effect of extra-

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facts congruent with both biases. They claim that in experiment 1 (which used two cases, one with exclusively exonerating, the other with exclusively incriminating, facts) there was no room for selective emphasis or weighing because all the facts in a given case pointed in the same direction. Kaplan and L. Miller, *supra* note 192, at 1449. Even if the cases were constructed as claimed, Kaplan & L. Miller seem to forget that Ostrom, Werner, and Saks found bias to affect the scale value as well as the weight of the evidence. In their view, bias could alter the incriminating or exonerating set of facts by distorting their probative value. Ostrom, Werner, & Saks, *supra* note 81.

198. Kaplan & L. Miller, *supra* note 192, at 1449.

199. *E.g.*, Sue, Smith, & Caldwell, *supra* note 45; Wolf & Montgomery, *Effects of Inadmissible Evidence and Level of Judicial Admonishment to Disregard on the Judgments of Mock Jurors*, 7 J. APPLIED SOC. PSYCH. 205 (1977).

200. Broeder, *supra* note 68, at 754.

201. Oros & Elman, *Impact of Judge's Instructions upon Jurors' Decisions: The Cautionary Charge in Rape Trials*, 10 REPRESENTATIVE RESEARCH SOC. PSYCH. 28 (1979).

202. *See* text accompanying notes 64-65.

203. McGuire & Bermant, *Individual and Group Decisions in Response to a Mock Trial: A Methodological Note*, 7 J. APPLIED SOC. PSYCH. 220 (1977).

legal factors, as it appears to do in the above studies, it is necessary to question the form of influence at work. Are jurors explicitly raising the excluded considerations, or are they yielding to them in a less obvious, defiant way? As Kalven and Zeisel observed, juries will rarely conduct their deliberations in the teeth of the law. Juries may be more likely than individuals to recall and to enforce the restrictive instructions they receive.<sup>204</sup> Unlike individuals mulling over a body of evidence, juries have a clear way of operationalizing a restrictive instruction: they can honor it simply by declining to discuss the excluded information. In at least two of the cited experiments, it was actually found that the ineffective instructions were at least publicly observed. Broeder tape-recorded his deliberations, and learned that the instructed juries did not bring up the defendant's insurance, however much they may have been influenced by it.<sup>205</sup> Hans and Doob, as previously mentioned, found that their juries did not discuss the highly prejudicial matter of the defendant's criminal record.<sup>206</sup>

But this self-restraint need not be universal. Juries may be more likely than individuals to ignore restrictive instructions concerning at least some highly probative or equitably significant information. The "liberation" account of group polarization would predict such a result: individual jurors who had repressed their inclination to use the excluded information, in conformity with a legal norm, would become emboldened by the discovery that others shared this inclination. This would be much more likely to happen in the case of information that reasonable men might consider important, such as the propensity revealed in the defendant's prior record, or severe but legally insufficient provocation given by the victim. In the case of such excluded considerations, group consensus might give legitimacy to a strong but otherwise resistable temptation. This possibility is only speculative, however, because no research of which we are aware has both varied the probative and equitable value of excluded evidence and monitored the resulting group deliberation.

We already have support from Hans and Doob for the second type of influence—the distortion of the evidence in the direction of the ex-

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204. H. KALVEN & H. ZEISEL, *supra* note 7, at 165. D. Colasanto and J. Sanders argue that the far greater conformity to the legal norms they found in the decisions of deliberating subjects was due largely to their considerably greater recall of the judge's instructions: "Differences between deliberators and non-deliberators can probably be accounted for by the fact that it is more difficult for individuals deciding a case alone to remember correctly and understand all of the judge's instructions. In a group discussion of the issues there is likely to be at least one person who can remember any given part of the instructions and who will volunteer information on the legal points where appropriate." D. Colasanto & J. Sanders, *supra* note 46, at 22.

205. Broeder, *supra* note 68, at 754.

206. See text accompanying notes 64-65 *supra*.

cluded information.<sup>207</sup> Doob suggested that this effect failed to appear in pre-deliberation judgments merely because they were made without a chance to consider the restricted evidence.<sup>208</sup> It may be, however, that group discussion not merely permitted, but facilitated the distortion of the evidence toward the preferred outcome. In his discussion of groupthink, Janis argued that groups can be more effective than individuals at rationalizing the prevailing inclinations of their members.<sup>209</sup> This may be true in part because groups simply come up with *more* reasons for anything than do single individuals, as problem-solving literature has shown. But groups may also serve a mutual reassurance function by making their participants feel secure in their questionable treatment of the evidence. The snowballing rationalization that groups can generate is unlikely to be countered by the kind of "Eureka" corrective that Izzett and Leginski expected to find.<sup>210</sup> Because the excluded information is not discussed, it will be hard for critics within the group to enforce the rule against its consideration. The best that these opponents can do is to demand consistency in the appraisal of the evidence, and to suggest that the imbalances which do appear have a discreditable source. But where the excluded information radically alters the jurors' perception of the case, or raises universally acknowledged equitable concerns, there may be no one willing or able to adopt a critical standpoint.

Whether or not group discussion encourages the slanting of evidence toward a favorable result, there is no reason why it should be proof against a favorable result. Ostrom, Werner, and Saks demonstrated that individual differences in attitudes toward the presumption of innocence had a marked effect on the weight and scale value that jurors assigned to items of evidence.<sup>211</sup> Jurors with an initial bias toward conviction gave incriminating items more weight and probative value than did jurors with a pro-acquittal bias. If the importance and probative value of a piece of evidence may vary with an individual's predisposition, its inferential impact on a group may be similarly affected by its members' predilections. Where individuals differ widely in their outcome-dispositions, deliberation may balance out their distortions to achieve a reasonable approximation of objectivity. But where an extra-legal consideration strongly disposes most of the jurors toward a single outcome, deliberation will merely give them an opportunity to reinforce and to legitimize their preference.

Where does this leave us? IIT claims a consistent effect of group

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207. *Id.*

208. Doob, *supra* note 65, at 142.

209. Janis, *Groupthink*, in *PSYCHOLOGY TODAY* 43 (Nov. 1971).

210. Izzett & Leginski, *supra* note 62, at 273.

211. *See* text accompanying note 197 *supra*. *See also*, Ostrom, Werner, & Saks, *supra* note 81.



deliberation on external bias, but we have seen in the last two sections that its assumption of representative discussion may not be tenable. While deliberation can be expected to increase the weight of the admissible evidence, it will not always do so in a manner that preserves its inferential impact. It may increase the weight of evidence selectively, emphasizing those items that are associated with or support the same conclusion as the excluded information. It may also distort the scale value of the evidence, making it appear more probative when it is consonant with the jurors' outcome-preferences or sentiments. Finally, group accord may sometimes encourage jurors to defy restrictive instructions, and in deliberation to raise matters that they would, in their private evaluation of the evidence, attempt to suppress.

VI. THE EFFECT OF DEMONSTRATIVE EVIDENCE AND DEFENDANT  
IDENTITY ON INDIVIDUAL AND GROUP JUDGMENTS:  
AN EXPERIMENT

Without the assurance that deliberation will consistently reduce bias, we are left to consider its effect on the multiplicity of factors that may be raised in a trial. Izzett and Leginski have provided a foretaste of the complications.<sup>212</sup> The impression of great variability in the values subject to polarization is reinforced by considering the scattered instances of jury polarization we have found. With different case material and differently composed juries, deliberation has been shown to heighten the values of leniency,<sup>213</sup> harshness,<sup>214</sup> and stringency about proof,<sup>215</sup> as well as to increase the biasing effect of the defendant's record<sup>216</sup> and the attorney's sex.<sup>217</sup> Clearly there has not been enough consistency in their findings to encourage broad generalizations about value shifts in juries. We have a more modest goal in the final section of the article. We present the results of an experiment that investigates our principal concern—the interplay of legal and extra-legal factors in group decision-making—in a realistic legal setting. We doubt that a general rule could be developed that would predict how group deliberation will affect the impact of evidentiary and non-evidentiary concerns, but we do intend to show that acquaintance with the various ways in which

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212. See Izzett & Leginski, *supra* note 62. See text accompanying notes 162-74 *supra*.

213. *Id.*

214. Vidmar, Group Induced Shifts in Simulated Jury Decisions (1972) (paper delivered at annual meeting of the Midwestern Psychological Association).

215. Nemeth, *supra* note 180. It should be noted that it is the present authors, not Nemeth, who interpret her results to show increased stringency about proof. We place a similar interpretation on Bray and Noble's findings. See text accompanying note 182 *supra*.

216. Hans & Doob, *supra* note 64.

217. McGuire & Bermant, *supra* note 203.

groups inhibit and facilitate extra-legal influences can yield useful predictions in specific cases.

In a study conducted last year, we examined the effects of two trial variables largely unexplored in the psychological literature: the use of demonstrative evidence by the plaintiff, and the corporate status of the defendant. We chose these factors because they have been a matter of persistent concern to trial practitioners (especially in civil trials, which have received comparatively little attention from psychologists), and they present the opportunity to study the types of emotional and equitable influences to which jurors actually are subject. Demonstrative evidence has both informational value and emotional impact. Because of this combination, its admission is a predictable source of contention between attorneys, and its use by the jury a matter of great interest. The corporate status of the defendant raises powerful equitable concerns about the ability to pay and the distribution of loss: policy issues which the law prefers to see resolved by legislatures, not juries. These issues, fraught with legal, ethical, and psychological significance, are raised every time a plaintiff seeks to introduce demonstrative evidence of his injuries against a corporate defendant.

We begin with some background regarding these issues. Demonstrative evidence includes all phenomena that can convey a relevant first-hand sense impression to the trier of fact, as opposed to those which serve merely to report the second-hand sense impression of others.<sup>218</sup> Pictures, models, and diagrams are among the types of demonstrative evidence frequently employed. Because such forms of representation are frequently used in personal injury cases, they often depict fairly gruesome injuries; sometimes an object itself, such as a surgically removed uterus, is preserved in evidence.<sup>219</sup> In the past, this type of presentation was the source of heated controversy, with many judges and legal commentators believing that such evidence would tend to arouse jurors' emotions and sympathies and would blind them to the more pertinent facts of the case.<sup>220</sup> In recent years, courts have become less anxious about the capacity of jurors to retain their objectivity in the face of emotionally arousing presentations.<sup>221</sup> This shift in attitude may reflect a generally heightened confidence in jury performance over the past two decades.<sup>222</sup> The controversy over the emotion-arousing

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218. See MCCORMICK'S HANDBOOK OF THE LAW OF EVIDENCE 524 (E. Cleary ed. 1972).

219. *E.g.*, *People v. Tilley*, 411 Ill. 473, 104 N.E.2d 499 (1952).

220. *See, e.g.*, *Cady*, *Objections to Demonstrative Evidence*, 32 MO. L. REV. 333 (1967).

221. *See, e.g.*, *Napier v. Commonwealth*, 426 S.W.2d 121, 122-23 (Ky. 1968). "The time has come when it should be presumed that a person capable of sitting as a juror in a murder case can, without losing his head, bear the sight of a photograph [of the victim.]"

222. R. Simon notes that the publication of *The American Jury* and other Chicago Jury Project studies relieved some of the most pressing doubts about jury competence and self-discipline. R. SIMON, *supra* note 1, at xiii.

qualities of certain types of demonstrative evidence appears to have been swept under the rug. The individual judge has been left to decide whether a given photograph or demonstration will have more emotional than probative value. This area of discretion is now codified in the Federal Rules of Evidence<sup>223</sup> and various state rules.<sup>224</sup>

This fertile area of investigation has been largely ignored by psychologists. One notable exception is Oliver and Griffitt's study of "Emotional Arousal and Objective Judgment."<sup>225</sup> This experiment examined the effects of photographs of an injured hand on subsequent juror judgments. Subjects who were allowed to see pictures of the injury in question awarded the plaintiff a significantly larger sum of money than those subjects who did not see the pictures. The researchers concluded:

The inclusion of the emotion-arousing visual material led to a marked difference in judgments, regardless of the actual case merits. . . . As the legal system is supposed to foster objective evaluation of factual evidence, it would certainly seem, based on these data, that the decision of many courts not to admit materials such as these slides is soundly based.<sup>226</sup>

This study, however, reveals nothing about the probative value of the pictures: perhaps they made the subjects more fully aware of the true plight of the plaintiff, more aware than they would have been had they heard only a verbal description. If this is true, then viewing the pictures may have resulted in a more "just" award. It is impossible to conclude *a priori* that pictures such as these will necessarily lead to an emotional state that prohibits the jurors from making a rational decision; in fact, the added information they contain may be far more significant than the sympathies they engender.

A second study related to this issue demonstrated that vivid evidence can sometimes have an impact that is clearly not justified by its informative worth. Farmer and others<sup>227</sup> compared the results of simulated trials in which the key witness for one side was presented on videotape, and the key witness for the other side in a printed transcript. They varied the side which had the videotaped witness. Although the testimony of these witnesses was identical in the two versions, both sides did significantly better when their key witness appeared on videotape rather than in print.<sup>228</sup> This difference could have resulted only as an

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223. FED. R. EVID. 403.

224. *E.g.*, CAL. EVID. CODE § 352 (West 1978); N.J. EVID. R. 4.

225. Oliver & Griffitt, *Emotional arousal and "objective judgment,"* 8 BULL. PSYCHONOMIC SOC'Y 399 (1976).

226. *Id.* at 400.

227. Farmer, Williams, Cundick, Howell, Lee, & Rooker, *The Effect of the Method of Presenting Trial Testimony on Juror Decisional Process*, in PSYCHOLOGY IN THE LEGAL PROCESS 59 (B. Sales ed. 1977).

228. *Id.* at 66-67.

effect of the vividness of the evidence, and not because it was more informative. Although vivid evidence can have an excessive impact, we can never ascertain precisely how much of the effect is excessive in the typical case where vividness and informativeness are naturally confounded.

It is evident that further research is needed in this area in order to gauge the various effects of demonstrative evidence on civil juries. It is likely that these effects would not be uniform throughout all civil cases but would depend, among other things, upon the identity of the defendant. The capacity of the defendant to pay damages may impose a ceiling on the jury's heightened sympathy for the victim. One would not expect any jury to require an individual to pay an award of \$127.8 million—the largest single plaintiff's personal injury verdict to date, assessed against Ford Motor Company.<sup>229</sup> That juries consistently award plaintiffs larger sums when the defendant is a corporation is not surprising. A corporation is much more anonymous and impersonal than an individual; the responsibility for payment of the award does not lie with one individual, but is diffused through great numbers of people. Smigel<sup>230</sup> provided empirical evidence that this is a pervasive attitude among potential jurors. In his study, subjects revealed that they would rather steal from large businesses than from the government or from small businesses. When asked why, they offered such reasons as anonymity, impersonality, bureaucratic inefficiency, and capacity to absorb the loss.<sup>231</sup> From such reasoning, one might suspect that corporations would be especially vulnerable to certain types of demonstrative evidence in personal injury suits. Indeed, in *Illinois Central Railroad Co. v. Seitz*, the court stated: "There is enough natural and inherent prejudice in the minds of the jurors against the railroad and other corporations without having it augmented by direct and improper appeals calculated to arouse the sympathy, passion, or prejudice of the jurors."<sup>232</sup> The prejudicial impact of corporate identity may vary in scope: the defendant's status may influence jurors only when the threshold decision on liability has been made; it may implicitly lower the standard of proof for liability or raise the standard of due care; or, at the extreme, the fact of injury may merely provide the occasion for a limited redistribution of wealth. In our experiment, we sought to narrow this range of possible effects by conceding the liability of the defendant.

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229. The award in the "Pinto" case was the largest ever at the time Igoe's article was published. See Igoe, *Punitive Damages in Products Liability*, 34 J. Mo. B. 394 (1978).

230. Smigel, *Public Attitudes Toward Stealing as Related to the Size of the Victim Organization*, 21 AM. SOC. REV. 320 (1956).

231. *Id.* at 327.

232. *Illinois Cent. R.R. v. Seitz*, 111 Ill. App. 242, 243 (1903).

We were interested in studying both demonstrative evidence and corporate status in the setting of a single trial. When psychologists want to test the effect of two or more different factors—here, the nature of the evidence and the status of the defendant—they employ what is called a factorial design: a random assignment of subjects to every possible combination of conditions.<sup>233</sup> Here, there are four such combinations, determined by whether the plaintiff's evidence is demonstrative or verbal, and whether the defendant is a corporation or an individual. This design allows psychologists to study the independent effect of these two factors (for example, the effect of demonstrative evidence regardless of corporate status), as well as any effects due to particular combinations of these factors (for example, demonstrative evidence and corporate status)—above and beyond their separate effect.

Our primary dependent measure—the response we wanted to compare for the four conditions—was the amount of damages awarded to the plaintiff. This is a more sensitive measure than a dichotomous verdict of the impact of the manipulated factors.

We presented one group of subjects with an actual artificial limb, and another with only the accompanying verbal description. Half the subjects in both evidence categories, demonstrative and verbal, assessed damages against a corporate defendant, and the other half against an individual. We predicted that the vividness of the prosthetic limb would significantly increase the award of damages. We also predicted that subjects would award plaintiffs larger sums of money if the defendant were a corporation, as opposed to an individual. With corporate status removing the “ceiling” from the damages award, we speculated that demonstrative evidence against a corporate defendant would have an especially pronounced effect.

The first predicted effect, for demonstrative evidence, would reflect the combination of greater information and increased sympathy resulting from a tangible display of injury. We expected this effect to be amplified by group decision, because deliberation would give jurors the opportunity to translate their feelings of pity for the defendant into an “objective” assessment of his impairment. This is a form of extra-legal influence discussed above: the close affinity of powerful sentiments to admissible evidence will allow the jury to express its feelings within the etiquette of the law.<sup>234</sup> We expected that this process would receive a significant boost from group discussion. It should be noted that IIT would not make a contrary prediction, because the evidentiary aspect

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233. Further explanation of the factorial design may be found in almost any introductory statistics textbook.

234. See H. KALVEN & H. ZEISEL, *supra* note 7, at 165.

of the limb presumably would receive greater weight in group discussion that might offset the diminished impact of sympathy.

We were not as confident about the impact of group discussion on the corporate-status effect. Taking our cue from the studies that have consistently shown a boomerang effect when instructions specify what the jury is to ignore,<sup>235</sup> we did not instruct our juries to disregard the defendant's corporate status. We settled for a general instruction<sup>236</sup> to jurors to consider only the evidence and arguments presented in the attorney's speeches, speeches which made no reference to corporate status. Thus, many juries may have felt entitled, or at least not forbidden, to discuss corporate status—the teeth of the law were not closed so tightly against it. We would not expect much of a “Eureka” effect because discussion of corporate status may not have been an obvious “mistake.” In fact, group consensus could have the opposite effect of legitimizing the discussion of corporate status. Thus, we did not share IIT's prediction that deliberation would reduce this bias. We expected the difference between corporate and individual defendants to remain after deliberation.

In testing these predictions, we tried to avoid some of the pitfalls of the trial simulations discussed earlier.<sup>237</sup> We had our subjects listen to a tape-recording of speeches made by the opposing attorneys, rather than read a printed text. Our case was loosely based on an actual civil trial,<sup>238</sup> and both the arguments used and the evidence presented are the kinds that would actually be encountered in a personal injury case.

Although we limited the jury's decision to damages by eliminating the issue of liability, we think this was a very defensible restriction. The variables manipulated, type of evidence and identity of defendant, would be expected to have a greater impact on the size of the award than on the decision of liability. The demonstrative evidence of injury would have greater relevance for damages, and the defendant's corporate status more equitable significance. If we had our jurors decide the defendant's liability, we could only guarantee that we would receive their judgment on damages by asking the difficult subjective question posed in other studies:<sup>239</sup> Assuming the defendant were liable, how much would you assess against him for damages? We chose to make

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235. *Supra* notes 199-201.

236. The judicial instructions employed in this simulation represent a synthesis of North Carolina Patterned Jury Instructions §§ 101.20, 105.10, 105.30, and 150.40, adapted to fit the facts of our case. See NORTH CAROLINA CONFERENCE OF SUPERIOR COURT JUDGES, NORTH CAROLINA PATTERNED JURY INSTRUCTIONS FOR CIVIL CASES (1975).

237. See text accompanying notes 48-54 *supra*.

238. *Jeffers v. City & County of San Francisco*, No. 343965 (Super. Ct. 1946).

239. *E.g.*, *Bray & Noble*, *supra* note 182.

this concession of liability the operating assumption of our trial, rather than the premise of a hypothetical question.

Finally, we used deliberating jurors.<sup>240</sup> This was an obvious necessity because we sought to compare group and individual judgments. But further, we believe the subjects' anticipation of group discussion probably improved the thoughtfulness of their individual decisions. Here, without further preface, is our experiment.

## A. *Method*

### 1. *Subjects*

One hundred nineteen students enrolled in an introductory psychology course at the University of North Carolina at Chapel Hill served as subjects.<sup>241</sup> Participation in the study was voluntary, with partial credit given toward fulfillment of the course requirement. Subjects were run in twenty-three groups of four to six members per group. A 2 × 2 factorial design was employed, with each subject assigned randomly to

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240. Further, our dependent measure was the size of the *jury* award, not the awards of individual jurors after deliberation. In reviewing studies which have used deliberation, we have not always distinguished between those which measured group verdicts, e.g., Hans & Doob, *supra* note 64; Sonaike, *supra* note 149; Broeder, *supra* note 68, and the great majority of others, which have measured individual judgments after deliberation. There may be at least two reasons for preferring the latter measure: first, the experimenter may be primarily concerned with the effect of deliberation on individual judgment (as is the case with IIT research) and second, the use of groups greatly reduces the number of results and thus the statistical power of the experiment. But studies using individual response ignore any contribution that might be made by the dynamics of reaching a collective decision (see the brief discussion of social decision rules at text accompanying notes 117-21 *supra*), and are, therefore, less complete simulations.

241. As noted above, note 51 *supra*, Colasanto and Sanders found that conformity to a legal norm of decision-making was significantly reduced both by omitting deliberation and by using students, rather than former jurors, to decide the case. These shortcomings, however, were of unequal magnitude:

[T]he presence of a deliberation is by far the most crucial aspect of the methodological design of these experiments. . . . The essence of jury decision-making (as opposed to other kinds of decision-making) is the use of an imposed theory and definition of responsibility in determining the guilt of the accused. Our analysis clearly shows that non-deliberators do not qualify as jurors based on this criterion. . . .

According to the criterion of the development and use of an imposed theory of responsibility in the decision-making process, the deliberating jurors and students are somewhat alike. On this basis, we might conclude that, in the interest of minimizing the costs of jury experiments, it would be reasonable to let social psychologists continue to use students as subjects in their research as long as these subjects are allowed to deliberate.

Colasanto & Sanders, *supra* note 46, at 26. Colasanto and Sanders qualify this conclusion by noting: "[S]tudents are more likely to incorporate their own ideas about 'justice' into the decision-making process and are more likely to reject the legal guidelines for decisions when they run counter to their own values." *Id.* at 27.

For a relatively modest experiment such as our own, the cost of recruiting non-students as jurors would have been prohibitive. Our principle manipulation concerned vividness, and we doubt that student "nullification" of legal restrictions would have made much difference here. We readily concede, however, that the effect we found for the corporate status of the defendant might not have been so pronounced if we had not used students.

one of the four conditions: individual-demonstrative, individual-verbal, corporation-demonstrative, and corporation-verbal.

## 2. Procedure

Upon entering the experimental room, subjects sat in two rows of three chairs, arranged to simulate a small jury box. The chairs faced a long table containing a tape recorder, stacks of questionnaires and handouts, and an artificial leg that was wrapped in a plastic bag and white sheet, and partially hidden from the subjects' view. After five minutes to allow for late arrivals, the experiment began. Each student was handed a mimeographed sheet entitled "Interaction Patterns of Civil Juries,"<sup>242</sup> and was told that the handout "should be self-explanatory." The subjects were asked to "read it through a couple of times to make sure you understand what you are to do. If you have any questions, I will answer them at that time." The handout stated that the study was "investigating the various ways in which members of a civil jury interact when faced with the task of reaching a decision in a civil case." It added that civil juries usually decide whether the defendant is responsible for the civil injury which he has caused, and if so, how much he should pay the plaintiff for damages. It was noted that in this case, however, the defendant had admitted responsibility, and thus the subjects' only task was to decide on the monetary award the plaintiff should receive. The handout also stated that the subjects were to listen to a tape-recorded portion of a transcript of a trial,<sup>243</sup> and that after hearing the evidence presented on the tape, they would be asked to "decide on the monetary award you think the plaintiff should receive." Subjects were asked, however, to base their decisions "only on the evidence you are about to hear, disregarding any evidence you think *should* be considered."

Following the instructions, the subjects read a brief summary of the case. All handouts were identical, with the exception of the identity of the defendant, which was revealed in the case title and in the last sentence of the case summary.<sup>244</sup> The defendant, Holden, was identified as either Jack Holden or Holden Industries, Incorporated. All handouts contained identical facts: as the result of negligence on the part of Holden, John Blake, the plaintiff, had sustained a severe leg injury that required the amputation of his left leg.

Following the case summary was a reminder that Holden had admitted full responsibility for the accident, and that the subjects' task was to decide upon the amount of money Blake should be awarded for dam-

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242. See appendices II & III *infra*.

243. *Id.*

244. *Id.*



ages. The handout further instructed the subjects that the first voice on the tape would be Holden's attorney,<sup>245</sup> the second voice would be Blake's attorney,<sup>246</sup> and the third voice would be the judge's,<sup>247</sup> presenting instructions on how to use the evidence presented.

After allowing the subjects five minutes to read, the handouts were collected and the subjects were asked if everything was clear and understandable. After being assured that the subjects understood the task, the experimenter reminded the subjects of the order of voices on the tape and asked them to recall that they were to base their decision only upon the evidence presented on the tape. They were then informed, depending upon the condition, that Holden was either "an average man with a family of three, holds no insurance policy, and earns about \$30,000 a year," or "an average corporation, with assets totalling about \$2 million at the end of the last fiscal year." The experimenter then turned on a Califone reel-to-reel tape recorder and sat down on the table next to the recorder, pretending to be listening carefully to what was on the tape.

The taped presentation of the attorneys' speeches and judge's instructions was the same for all conditions.<sup>248</sup> For the demonstrative conditions, however, the tape recorder was shut off about two-thirds of the way through Blake's attorney's presentation, and the artificial leg was presented to the subjects. This was accomplished by having the experimenter cut off the tape recorder, walk to the back of the long table where the artificial leg lay, and bring it over to where the subjects were seated. While unwrapping the leg from the plastic bag and white sheet that covered it, the experimenter made the following remarks:

This is an artificial leg very similar to the one that Blake's attorney is talking about, and very similar to the one that Blake will have to wear for the rest of his life. I would like for you [the subject in the front left-hand seat] to examine this as closely as you like and then pass it on to the other members of the jury.

After each subject had examined the leg, which in total required approximately two minutes, the experimenter wrapped the leg in the white sheet, returned it to its original place, and turned on the tape recorder again. Blake's attorney then finished his speech, as did the judge, who asked the jury to return a majority verdict. The scheduling of the experiment did not permit us to budget the extra time we anticipated it would require for most juries to reach a unanimous verdict. The tape played for approximately seven minutes, with Holden's attorney's speech lasting approximately two minutes and forty-five seconds,

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245. *Id.*

246. *Id.*

247. *Id.*

248. See appendices IV, V, & VI *infra*.

Blake's attorney's speech about two minutes and five seconds (excluding the leg examination time in the demonstrative conditions), and the judge's instructions lasting about one minute. Between each voice there was a fifteen-second pause. At the conclusion of the tape, the experimenter reminded the subjects of the nature of their task, and then asked them to step into an adjacent "deliberation" room.

Subjects seated themselves around a three by six and one-half foot rectangular table, with three chairs on each side. The experimenter then handed each subject an award questionnaire<sup>249</sup> and stated: "Before you deliberate, I would like for you to decide individually how much you would award Blake." The questionnaires contained a scale from \$0 to \$150,000, marked off in increments of \$5,000, and subjects were asked to make a mark on the scale that corresponded to the award they thought Blake should receive.<sup>250</sup> The experimenter then collected the questionnaires and informed the subjects:

Take about ten to fifteen minutes and seriously weigh and discuss the evidence that you have just heard. Then, by majority vote, decide on an award you think Blake should receive for damages. When you have done that, someone just mark it down on this sheet,<sup>251</sup> and then remain in here until I return for your decision.

The experimenter then closed the door and returned to the original experimental room, where he busied himself with administrative duties.

Most groups deliberated for approximately ten to twelve minutes, with some taking only five; others required the full fifteen minutes allowed. The experimenter could hear the subjects deliberating in the next room, however, and was quick to re-enter when they finished because there were other questionnaires to be administered. Upon entering the room, the experimenter collected the jury award questionnaire and distributed a qualitative questionnaire, which the subjects answered individually in the experimenter's presence.

The qualitative questionnaire<sup>252</sup> contained questions concerning the emotionally-arousing qualities of each attorney's presentation of evidence,<sup>253</sup> the seriousness with which the subjects assumed their role as jurors,<sup>254</sup> and a question that would possibly shed some light on the probative value of the presentation of the artificial leg.<sup>255</sup> Interspersed among these queries were filler questions concerning communication between jurors. Questionnaires for all groups were identical, with the

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249. See appendices VII & VIII *infra*.

250. *Id.*

251. See appendix IX *infra*.

252. See appendices IX & X *infra*.

253. *Id.*

254. *Id.*

255. *Id.*

exception of one question:<sup>256</sup> for demonstrative conditions, subjects were questioned on the probative value of the *actual* presentation of an artificial leg; for verbal conditions, subjects were questioned on how probative the presentation of an artificial leg *would have been* had it been presented as evidence. After collecting the questionnaires, the experimenter invited questions and comments, debriefed the subjects, and dismissed them.

## B. *Results*

As noted above, when psychologists want to test the effects of two or more factors on certain groups of subjects—here, what effects the nature of the evidence and the status of the defendant may have on jurors—they use a factorial design. Since our experiment involves two factors (type of evidence and defendant identity), with two levels for each factor (demonstrative and verbal evidence, and individual and corporate defendants), we have four separate groups, or cells, in our design: demonstrative-individual, demonstrative-corporation, verbal-individual, and verbal-corporation. As we also noted earlier, the purpose of such a design is to enable researchers to determine the contribution of each factor to the dependent measure obtained. For example, in the demonstrative-corporation cell, subjects awarded the plaintiff a significantly larger amount of money than in the verbal-individual cell. The question then arises: What caused such a difference? The defendant's status as a corporation rather than an individual, or the fact that the subjects saw the artificial leg instead of just heard about it, or both? To determine the answers to questions such as these, researchers often employ a statistical test known as the analysis of variance.

Briefly, analysis of variance involves a determination of the extent to which a particular factor is causing the scores between groups to vary. For example, in our experiment, scores (monetary awards) in the demonstrative groups were higher than scores in the verbal groups. In this instance, an analysis of variance test (an ANOVA test) enabled us to determine whether the differences in the type of evidence were causing this variance in scores.

In such an experiment, not only can scores vary *between* groups, but they can vary *within* the groups as well. Thus, the variance in the scores between the two groups in the previous example may not have been any greater than the variance within the groups themselves. Were this so, we could not say that the type of evidence caused the scores to differ between the two groups, because they differed just as much within the groups themselves, a difference due only to chance. The ob-

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256. Compare appendix IX with appendix X *infra* (specifically, question five).

served difference between the two groups would be no greater than the chance difference within each group, so we could not conclude that the former was due to the type of evidence. The analysis of variance test compares the variance in scores between two or more groups with the variance in scores within the groups, to determine whether the factor in question makes a difference that cannot be due to chance. When the variance within groups is low and the variance between groups is high, one can be confident in assuming that the factor examined is responsible for the difference in the scores between the groups. Because subjects within each group received the same experimental treatment and gave roughly the same award to the plaintiff; any difference between groups must be due to different treatments (for example, demonstrative treatment, as opposed to verbal treatment).

Because all subjects bring to the experiment something that the researcher cannot control—their backgrounds and personalities—there will always be some variance in scores within groups. This within-group variance provides a measure by which we may assess the probability that the observed differences between groups are also due only to these uncontrolled factors—to chance. The smaller the effect of uncontrolled factors, the smaller the within-group variance; thus, the greater the probability that a given difference between groups is not due to chance. When the probability that the between-group differences are due to chance falls below five per cent social scientists are willing to assert that the results are due to the factors manipulated. A significance level of less than .05 (expressed as " $p < .05$ ") indicates that there is a less than five per cent chance that the results occurred not because of the factor manipulated, but merely because of chance. Thus, the lower the significance level (the  $p$  value), the higher the probability that the results obtained are due to the factors manipulated. With this brief background, we now turn to the results of our experiment.

Each of the dependent measures in this  $2 \times 2$  factorial design was subjected to a two-way analysis of variance.<sup>257</sup> The means (the total scores divided by the number of subjects) and standard deviations (a measure of the within group variance) for pre-deliberation awards of individual jurors are presented in Table 1. Regarding the amount of money awarded to the plaintiff, results of the analysis of variance indicated a main effect for identity of the defendant,  $p < .001$ , with the plaintiff receiving a significantly greater amount of money when the defendant was a corporation. There was also a main effect for the type of evidence,  $p < .002$ , with the plaintiff receiving a significantly larger

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257. Treatment of this nonorthogonal design (different number of subjects in the four conditions) was in accordance with the procedures recommended by Appelbaum & Cramer, *Some Problems in the Nonorthogonal Analysis of Variance*, 81 PSYCH. BULL. 335 (1974).

award when the jurors were presented the actual artificial leg. The interaction, however, only approached significance,  $p < .130$ .

TABLE I  
Pre-deliberation Awards for Individual Jurors

Type of Evidence**	Identity of the Defendant*	
	Individual	Corporation
Demonstrative	M = \$73,257.562	M = \$114,310.375
	S.D. = 37523.324 (N = 33)	S.D. = 38654.203 (N = 29)
Verbal	M = \$62,500.035	M = \$83,666.687
	S.D. = 36748.852 (N = 27)	S.D. = 28037.297 (N = 30)

\* $p < .001$

\*\* $p < .002$

$p < .130$  (defendant  $\times$  evidence interaction)

TABLE 2

Post-deliberation Jury Awards

Type of Evidence**	Identity of the Defendant*	
	Individual	Corporation
Demonstrative	M = \$75,833.312	M = \$135,000.000
	S.D. = 14634.540 (N = 6)	S.D. = 13165.051 (N = 5)
Verbal	M = \$68,333.312	M = 79,166.625
	S.D. = 20065.969 (N = 6)	S.D. = 17151.293 (N = 6)

\* $p < .001$

\*\* $p < .001$

$p < .003$  (defendant  $\times$  evidence interaction)

Similar results were obtained for the post-deliberation jury awards, as shown in Table 2. The results indicated a significant main effect for identity of the defendant,  $p < .001$ , and for type of evidence,  $p < .001$ . For jury awards, however, there was also a significant interaction,<sup>258</sup>  $p < .003$ .

258. An interaction is a result that could not be predicted merely by adding the separate effects of each factor. Where there is an interaction, the result is determined not merely by the level of each factor, but by their particular combination.

As indicated in Tables 1 and 2, post-deliberation jury awards were greater than pre-deliberation individual awards in every condition except corporation-verbal. A grand means test of the difference scores between the mean juror award and the jury award for each of the twenty-three juries indicated that this difference was greater than zero, with juries awarding larger sums,  $F(1, 19) = 6.450, p < .020$ . An analysis of variance of these difference scores indicated a main effect for type of evidence,  $p < .027$ , and a significant interaction,  $p < .001$ .

An analysis of variance was also performed on the qualitative questionnaire data. For question 2, concerning the emotional arousal engendered by Holden's attorney's presentation of evidence, a marginally significant main effect was revealed for identity of the defendant,  $p < .066$ , with subjects perceiving Holden's attorney's presentation as less emotionally arousing when Holden was a corporation.<sup>259</sup> For question 3, concerning the emotional arousal engendered by Blake's attorney's presentation of evidence, a significant main effect was found for type of evidence,  $p < .013$ , where subjects perceived Blake's attorney's presentation as more emotionally arousing when they were presented with the actual artificial leg.<sup>260</sup> It is also important to note that there were no significant differences between conditions concerning the reported seriousness with which subjects assumed their role as jurors.<sup>261</sup> An important finding was that there were no significant differences in the probative value scores for the presentation of an artificial leg, regardless of whether the subjects actually saw the leg.<sup>262</sup> The demonstrative conditions displayed slightly, but not significantly higher, means.

A grand means test was also performed on the difference scores between the emotional arousal scores reported for Holden's and Blake's attorneys.<sup>263</sup> The test revealed that this difference was significantly greater than zero,  $p < .001$ , with Blake's attorney's presentation of evidence being perceived as more emotionally arousing. An analysis of variance of these difference scores reveals a significant main effect for identity of the defendant,  $p < .033$ , with subjects perceiving Blake's attorney's presentation of evidence as more emotionally arousing when Holden was a corporation. The main effect for type of evidence, however, only approached significance,  $p < .118$ .

### C. Discussion

The results indicated that, other variables being equal, subjects ex-

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259. See appendices IX & X (question 2).

260. *Id.* (question 3).

261. *Id.* (question 7).

262. *Id.* (question 5).

263. See appendix I *infra*.

posed to an actual artificial leg awarded significantly larger amounts of money than subjects who were not. These results support earlier research by Oliver and Griffith<sup>264</sup> and are perhaps accounted for by the vivid imagery aroused by this type of demonstrative evidence. The sensory experience one receives from touching and handling an artificial leg presumably makes one more keenly aware of what it must be like to actually wear one, and far more aware than one would be by merely listening to someone describe what it is like. Although the results indicated that the demonstrative evidence presentation was more emotionally arousing than the verbal presentation, it is by no means clear that the sensory experience the subjects received from handling the leg aroused their emotions to such an extent that they were no longer fair and impartial. In this study, an attempt was made to evaluate the probative value of a supposedly emotion-arousing piece of evidence. While the null hypothesis cannot be proven, it is worth noting that subjects who saw the artificial leg, and those who did not, did not differ significantly on the question of the leg's probative value: both reported that the leg had, or would have had, high probative value. Further indication of this was obtained in post-experimental discussion, where subjects in the verbal conditions were shown the artificial leg and reported that had they seen the leg earlier, they would have awarded a larger sum of money.

The results also indicated that when the defendant was a corporation, subjects awarded the plaintiff significantly larger amounts of money. These results support earlier research by Smigel.<sup>265</sup> Perhaps this phenomenon is attributable to the anonymous and impersonal nature of a corporation, which spared subjects the unpleasant task of balancing hardships between two individuals. The wealth and anonymity of the corporate defendant allowed the jurors to give full expression to their concern for the plaintiff's loss. In the words of many subjects, "They can afford it." It is interesting to note that subjects perceived Holden's attorney's presentation of evidence as less emotionally arousing when Holden was a corporation. Although the effect was marginal ( $p < .066$ ), it suggests that subjects' perceptions of the same presentation of evidence were altered by the identity of the defendant for whom the attorney was pleading. Not only did the identity of the defendant affect subjects' perceptions of the defendant's attorney's presentation of evidence, but it affected their perceptions of the plaintiff's presentation as well. Subjects perceived the plaintiff's attorney's presentation of evidence as more emotionally arousing when the defendant was a corporation, regardless of whether the evidence was demonstrative or verbal.

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264. See Oliver & Griffith, *supra* note 225.

265. See Smigel, *supra* note 230.

Thus, subjects appeared to give less weight to the arguments of an unsympathetic defendant and more to the arguments of his opponent, accommodating their biases in a manner similar to Hans and Doob's jurors.<sup>266</sup>

The two factors investigated, type of evidence and identity of the defendant, strongly interacted. This interaction was especially manifest in the corporation-demonstrative condition, where these two factors combined to produce an award substantially greater than those of the other conditions. It was also manifest in the difference scores between the mean juror award and the jury award for the corporate-demonstrative condition. Here, the two factors combined to produce a substantially greater increase from mean juror to jury awards than the increases in the individual-demonstrative and individual-verbal conditions.<sup>267</sup>

As anticipated, the significant effects found for the type of evidence and the identity of the defendant remained after deliberation. Only the effect of the evidence was significantly increased by deliberation, however. This suggests that not all values which have a powerful influence on individual decisions will be affected by group discussion in the same way, or to the same extent. Because corporate status had such a pronounced effect on individual judgments, group consensus apparently was not needed to legitimize its consideration. But the group did have a distinct role to play in enhancing the impact of demonstrative evidence. Each member of the group had acquired strong visual and tactile impressions of the prosthetic limb. Pooling these impressions would have intensified their emotional impact and provided the "objective" evidence necessary to support a suitable enlarged verdict. In addition, the emotional impact of the limb might have made the majority more determined to "pull up" the less generous members of the jury. It is unlikely that the majority would be so strongly motivated by the mere revelation of the defendant's corporate assets. We can only speculate about how group processes actually contributed to the verdicts we obtained, but the possibilities are intriguing.

## VII. CONCLUSION

As a final note, we would like to suggest a fairly ambitious program of applied research. The study we have just presented compared the effects of only two factors on individual and group verdicts: the vividness of the evidence and the corporate status of the defendant. We selected these factors because they appeared to have a significant role

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266. See Hans & Doob, *supra* note 64; Doob, *supra* note 65, at 142.

267. Compare table 1 with table 2 in text.



in civil trials, and because they lent themselves to experimental manipulation. Our belief in their significance was only speculation, but speculation based on courtroom lore, judicial opinion, and a handful of trial simulations.<sup>268</sup> For criminal trials, the psychologist need not rely on his hunches; *The American Jury* contains a comprehensive review of evidentiary and non-evidentiary factors known to cause judge-jury disagreements.<sup>269</sup> As argued earlier, the data which Kalven and Zeisel have presented afford no means to establish the role that group decision-making plays in creating or limiting these differences, and thus leave a question that invites experimental investigation.<sup>270</sup>

It would be worthwhile to explore the extent to which judge-jury disagreements are the result of differences between individual and group decision-making, as opposed to the differences between amateur and professional decision-makers. One field study reported that decision-making by three-judge panels may polarize the civil-libertarian values of individual judges, suggesting that expert, as well as lay, decision-makers may be strongly influenced by group processes.<sup>271</sup> A series of experiments could examine the differential affect on individuals and deliberating groups of the various legal and extra-legal factors revealed by Kalven and Zeisel to be sources of judge-jury disagreement. To the extent that deliberating groups were more influenced by these factors than individuals, there would be evidence that judge-jury divergence resulted from differences in the form of decision-making as well as the training and experience of the factfinders. To the extent that individuals were more influenced by these factors than groups, it would appear that group decision-making itself was an effective form of jury control. Either finding would challenge the hunch that deliberation plays a negligible role in establishing the distinctive character of jury decisions.

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268. See text accompanying notes 218-32 *supra*.

269. H. KALVEN & H. ZEISEL, *supra* note 7.

270. See text accompanying notes 87-91 *supra*.

271. Walker & Main, *Choice Shifts in Political Decisionmaking: Federal Judges and Civil Liberties Cases*, 3 J. APPLIED SOC. PSYCH. 39 (1973).

**Appendix I**

**Means, Standard Deviations, and Difference Scores for  
 Emotional Arousal of Defendant's and Plaintiff's  
 Presentation of Evidence**

Condition Defendant I.D.** Type of Evidence***	Question 2	Question 3	Difference*
	Defendant's Attorney	Plaintiff's Attorney	
individual-demonstrative	M = 4.333	M = 6.515	-2.181
	S.D. = 2.470	S.D. = 1.804	S.D. = 3.330
	(N = 33)	(N = 33)	
individual-verbal	M = 3.777	M = 5.814	-2.037
	S.D. = 2.063	S.D. = 2.236	S.D. = 2.695
	(N = 27)	(N = 27)	
corporation-demonstrative	M = 3.034	M = 7.068	-4.034
	S.D. = 2.179	S.D. = 1.70	S.D. = 3.267
	(N = 30)	(N = 30)	
corporation-verbal	M = 3.600	M = 6.066	-2.466
	S.D. = 2.143	S.D. = 1.529	S.D. = 2.330
	(N = 30)	(N = 30)	

\*p < .001

\*\*p < .033

\*\*\*p < .118

**Appendix II**

**Interaction Patterns of Civil Juries**

This is a study investigating the various ways in which members of a civil jury interact when faced with the task of reaching a decision in a civil case. In most cases, the jury's job consists of two parts: 1) determining whether the defendant is responsible for the civil offense with which he is charged, and 2) if the defendant is responsible, deciding on the appropriate amount of money that he should pay the plaintiff for damages. In some cases, however, the defendant admits responsibility, and thus, the jury's only task is to decide on the appropriate amount of money the plaintiff should receive for his damages.

This latter type, where the defendant has admitted responsibility, is the type of case that you will hear shortly. Here you are to pretend that you are a member of a real jury and are asked to decide the amount of money the plaintiff should receive. You will first read a brief summary of the case. Following this, you will listen to a presentation of evidence upon which you will base

your decision concerning the amount of money the plaintiff should receive. Although this presentation will be brief and represents only a portion of the total evidence normally presented in a civil trial, you should base your decision only on the evidence you are about to hear, disregarding any evidence you think *should* be considered. After hearing the presentation of evidence and the judge's instructions about how you should use this evidence, you will then decide on the monetary award you think the plaintiff should receive.

### Blake v. Holden

The following is an excerpt from a civil trial involving the plaintiff, John Blake, and the defendant, Jack Holden. In this trial, Blake is suing Holden for damages resulting from negligence on the part of Holden.

On Wednesday, January 16, 1977, John Blake, an employee of Reston Construction Company, finished work at approximately 5:30 p.m. and began walking to his car, which was parked at the bottom of a gradual incline. As Blake was crossing in front of his car to enter through the driver's side, the parking brake of a car some 50 feet up the hill from Blake gave away and the car started rolling toward Blake. Blake did not see the other car, however, and as he turned the corner of his car, the other car crashed into Blake's car, pinning his left leg between the two cars. Subsequently, Blake's left leg had to be amputated approximately six inches below the hip. Jack Holden, owner of the other car, claimed full responsibility for the accident because he knew beforehand of the poor condition of the parking brake, and therefore admitted being negligent in parking the car at the top of a hill.

Holden has claimed full responsibility for the accident, and it is now up to you to decide the amount of money that Blake should be awarded for damages. You will base your decision only upon the evidence that you are about to hear. The first voice you hear will be that of Holden's attorney; the second voice you hear will be that of Blake's attorney; and finally, the third voice you hear will be that of the judge, giving you instructions as to how you should use the evidence that you are presented.

## Appendix III

### Interaction Patterns of Civil Juries

This is a study investigating the various ways in which members of a civil jury interact when faced with the task of reaching a decision in a civil case. In most cases, the jury's job consists of two parts: 1) determining whether the defendant is responsible for the civil offense with which he is charged, and 2) if the defendant is responsible, deciding on the appropriate amount of money that he should pay the plaintiff for damages. In some cases, however, the de-

defendant admits responsibility, and thus, the jury's only task is to decide on the appropriate amount of money the plaintiff should receive for his damages.

This latter type, where the defendant has admitted responsibility, is the type of case that you will hear shortly. Here, you are to pretend that you are a member of a real jury and are asked to decide the amount of money the plaintiff should receive. You will first read a brief summary of the case. Following this, you will listen to a presentation of evidence upon which you will base your decision concerning the amount of money the plaintiff should receive. Although this presentation will be brief and represents only a portion of the total evidence normally presented in a civil trial, you should base your decision only on the evidence you are about to hear, disregarding any evidence you think *should* be considered. After hearing the presentation of evidence and the judge's instructions about how you should use this evidence, you will then decide on the monetary award you think the plaintiff should receive.

### Blake v. Holden Industries, Incorporated

The following is an excerpt from a civil trial involving the plaintiff, John Blake, and the defendant, Holden Industries, Inc. In this trial, Blake is suing Holden for damages resulting from negligence on the part of Holden.

On Wednesday, January 16, 1977, John Blake, an employee of Reston Construction Company, finished work at approximately 5:30 p.m. and began walking to his car which was parked at the bottom of a gradual incline. As Blake was crossing in front of his car to enter through the driver's side, the parking brake of a car some 50 feet up the hill from Blake gave away and the car started rolling toward Blake. Blake did not see the other car, however, and as he turned the corner of his car, the other car crashed into Blake's car, pinning his left leg between the two cars. Subsequently, Blake's left leg had to be amputated approximately six inches below the hip. Holden Industries, Inc., manufacturer of the parking brake system in the moving car, claimed full responsibility for the accident, as the brake system contained defective parts which prevented it from functioning properly.

Holden has claimed full responsibility for the accident, and it is now up to you to decide the amount of money that Blake should be awarded for damages. You will base your decision only upon the evidence that you are about to hear. The first voice you hear will be that of Holden's attorney; the second voice you hear will be that of Blake's attorney; and finally, the third voice you hear will be that of a judge, giving you instructions as to how you should use the evidence that you are presented.

### Appendix IV

*Holden's Attorney:*

"Ladies and gentlemen of the jury. Let me first say that I am very sorry that Mr. Blake lost his leg. *Any* time a human being has to undergo an experience as shocking as a loss of a limb, it is very heartbreaking and tragic indeed. Not too long ago, when a man lost his leg he was confined to a wheelchair for the rest of his life—never again able to stroll through the park or move around freely as you or I do.

Today, however, things are different. Thanks to modern technology, when someone loses a limb now, a person can wear an artificial limb that is almost as good as the real thing—in some ways even better. Today, amputees who are properly fitted with a modern artificial limb can do practically everything a person with a normal limb can do: they can swim, dance, ride horses, drive cars, play bridge, tie neckties—almost everything they could do before they lost their limbs. Thanks to modern science, a person can have the kind of tragic experience Mr. Blake had and still have everything restored to almost exactly what it was before.

Of course, it will take Mr. Blake a little time to adjust to having an artificial leg instead of a real one—but this will come in time. I am prepared at this moment to put on the stand dozens of amputees who will testify that once they got used to their artificial limbs, it seemed as if nothing had ever happened.

Therefore, I ask you, as members of the jury, to think reasonably about this issue before you decide how much Mr. Blake should be compensated for his damages. Certainly, he should receive some reasonable amount for his medical expenses and for his time away from work—all totaled this is about \$6,000. Thus, I think that an award of \$10,000 is clearly a generous offer. But to severely punish Holden for removing Mr. Blake from society would be a grave injustice. For as we have seen, Mr. Blake will not be removed from society, but will be able to function almost as normally as he used to. Therefore, I ask you to think of this issue not merely in terms of Blake, but in terms of Holden as well—who is indeed very sorry and grieved, and is willing to pay for all medical expenses and for the loss of time on the job that Mr. Blake has incurred. Thank you very much."

### Appendix V

*Blake's Attorney:*

"Ladies and gentlemen of the jury. I must say that the counsel for the defense did an admirable job of enlightening us on the progress of modern science. Yes, sir, our technology has progressed to the point where we can now replace a lost limb with an artificial one that is almost every bit as good as the

real thing. But what exactly is this marvelous scientific invention? How many of you have ever actually seen one of these lovely products of our technology?

The counsel for the defense has shown us that amputees can do practically everything that a person with a normal limb can do: drive cars, dance, ride horses—even swim. In fact, she claims that once one gets used to having an artificial limb, one is hardly even aware that it is artificial. Thus, all my client needs to do is to be properly fitted for an artificial leg, and things will be almost back to normal.

But I ask you, is it almost back to normal when my client has to get up each morning and strap on his leg? Is it almost back to normal when my client can barely walk in cold weather because the stainless steel, rust-proof joints become cold and hard to move? Is it almost back to normal when on his stroll through the park my client has to exert nearly twice the normal effort in order to throw his wooden foot in front of his body? These are but a few of the experiences that my client will have to go through for the rest of his life. These are the experiences that are made possible by *this* (slight emphasis) great technological achievement.

(three second pause)

As you can see, this marvelous invention is a far cry from the real flesh-and-blood human limb. My client will have to wear one of these lovely devices for the rest of his life. I am not here to seek punishment for Holden. All I am asking is that you think carefully about the amount of compensation Blake should receive for having to strap on one of those unwieldy contraptions every morning for the rest of his life. With the above considerations in mind, I do not feel that an award of at least \$150,000 is too much to ask as compensation for a loss as great as that of a leg. Thank you very much.”

## Appendix VI

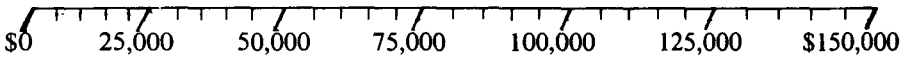
### *Judge*

“Now, members of the jury, you have heard the evidence and the arguments of counsel for the plaintiff and for the defendant. It is your duty to consider all the evidence, arguments, contentions, and positions urged by the attorneys in their speeches to you, and to weigh them in the light of your common sense, and as best you can, to determine the appropriate award that should be rendered in this case. You are the sole judges of the weight to be given any evidence. By *this* I mean that if you decide certain evidence is believable, you must then determine the importance of that evidence in light of all other believable evidence in the case.

Now, members of the jury, you may retire and select one of your members as foreman to lead you in your deliberations. You may render an appropriate award by *majority* vote. When you have decided on an amount you deem suitable, you may return to the courtroom to pronounce your decision.”

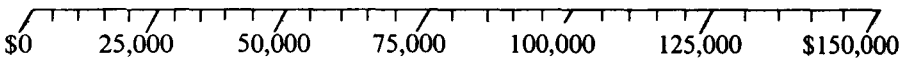
**Appendix VII**

1. If you were a real juror in this trial, how much money would you award the plaintiff, John Blake? (Make a mark on the scale below.)



**Appendix VIII**

1. If you were a real jury in this trial, how much money would you award the plaintiff, John Blake? (Make a mark on the scale below.)



**Appendix IX**

**Interaction Patterns of Civil Juries**

Please circle the number which most closely approximates your response to each question.

1. How did group deliberation affect your initial opinion about the amount of money that Blake should receive?

decreased the amount 1 2 3 4 5 6 7 8 9 increased the amount

2. How emotionally arousing was the evidence presented by Holden’s attorney?

(Recall that her evidence de-emphasized the disadvantages of having an artificial leg)

aroused very little emotion 1 2 3 4 5 6 7 8 9 very emotionally arousing

3. How emotionally arousing was the evidence presented by Blake’s attorney?

- (Recall that his evidence emphasized the disadvantages of having an artificial leg)
- aroused very little emotion      1 2 3 4 5 6 7 8 9      very emotionally arousing
4. How well were you able to communicate to other jurors what you perceived to be the essential points of the evidence presented?
- very unclearly      1 2 3 4 5 6 7 8 9      very clearly
5. In your opinion, do you feel that the presentation of an actual artificial leg demonstrated characteristics of this leg that you would not have been aware of had the leg only been *talked* about?
- did not make me more aware      1 2 3 4 5 6 7 8 9      made me more aware
6. How many other members of your jury do you believe hold your opinion about the amount of money that should be awarded?
- 1 2 3 4 5
7. How seriously do you feel that you took your role as a juror?
- not very seriously      1 2 3 4 5 6 7 8 9      very seriously

### Appendix X

#### Interaction Patterns of Civil Juries

Please circle the number which most closely approximates your response to each question.

1. How did group deliberations affect your initial opinion about the amount of money that Blake should receive?
- decreased the amount      1 2 3 4 5 6 7 8 9      increased the amount
2. How emotionally arousing was the evidence presented by Holden's attorney?
- (Recall that her evidence de-emphasized the disadvantages of having an artificial leg)
- aroused very little emotion      1 2 3 4 5 6 7 8 9      very emotionally arousing
3. How emotionally arousing was the evidence presented by Blake's attorney?
- (Recall that his evidence emphasized the disadvantages of having an artificial leg)
- aroused very little emotion      1 2 3 4 5 6 7 8 9      very emotionally arousing



4. How well were you able to communicate to other jurors what you perceived to be the essential points of the evidence presented?  
very unclearly      1 2 3 4 5 6 7 8 9      very clearly
5. In your opinion, do you feel that the presentation of an actual artificial leg would have demonstrated characteristics of this leg that you were not made aware of by only a *verbal* presentation of the leg?  
would not have made me more aware      1 2 3 4 5 6 7 8 9      would have made me more aware
6. How many other members of your jury do you believe hold your opinion about the amount of money that should be awarded?  
1 2 3 4 5
7. How seriously do you feel you took your role as a juror?  
not very seriously      1 2 3 4 5 6 7 8 9      very seriously

