

## Biased Interpretation of Evidence by Mock Jurors

Kurt A. Carlson and J. Edward Russo  
Cornell University

*Predecisional distortion* is jurors' biased interpretation of new evidence to support whichever verdict is tentatively favored as a trial progresses. In 2 experiments, students and prospective jurors distorted evidence from a mock trial. Further, the magnitude of prospective jurors' distortion was twice that of students. Consistent with previous research, distortion increased with juror confidence in whichever verdict was currently leading. In spite of clear instructions to ignore prior beliefs, general proplaintiff or prodefendant attitudes influenced the verdicts of prospective jurors, but not of students. These findings suggest that jury instructions should warn against not only premature decisions but also any tentative judgments, lest such opinions influence jurors' evaluations of subsequent evidence. Predecisional distortion in jury trials may lead to biased outcomes resulting from evidence order effects.

A fair jury trial requires, *inter alia*, that jurors engage in unbiased probative evaluation of the evidence using either a step-by-step or an end-of-sequence process. Although the latter avoids the influence of cumulated opinion, it is inhibited by memorial and computational burdens imposed by the large quantity of information presented in a typical jury trial. In addition, true end-of-sequence processing requires postponing all evaluative processing, something that may be too natural to suppress (Jarvis & Petty, 1996; Pennington & Hastie, 1986). For both reasons, attempts to provide a fair trial must accept that jurors often engage in step-by-step processing of the evidence. Courts recognize this and combat jurors' tendency to reach premature conclusions with oral and written guidelines, orientation videotapes, and judges' instructions to juries at the beginning of a trial. However, these preventive steps do not always succeed (Kramer, Kerr, & Carroll, 1990; Smith, 1993). In this article we ask whether deterring jurors from prematurely reaching a verdict is sufficient to protect against the distortion of new evidence. Specifically, as the trial proceeds, might any leaning toward one side or the other, no matter how tentative and reversible, influence the interpretation and evaluation of subsequent trial evidence?

*Predecisional distortion* is the biased interpretation and evaluation of new information to support whichever alternative is currently leading during a decision process (Russo, Medvec, & Meloy, 1996). We use the term *biased* as it has been used elsewhere (e.g., Hastie & Rasinski, 1988) to mean the systematic

deviation of evaluations away from a standard (Einhorn, Hogarth, & Klempner, 1977). Whereas most judgment biases involve a departure from a standard derived from statistical rules (e.g., Bayes's rule), the biases committed by jurors often involve failure to comply with court mandates. Examples include jurors' failure to follow jury instructions (Elwork, Sales, & Alfini, 1977; Forster-Lee, Horowitz, & Bourgeois, 1993) and to ignore inadmissible evidence (Flemming, Wegener, & Petty, 1999). Predecisional distortion satisfies both criteria for the existence of a bias. First, participants' evaluations deviate from a reasonable standard. In the juror situation, that standard is the evaluation of the same evidence when no verdict is leading in the decision maker's mind. Second, these deviations are systematic. Specifically, they favor, predictably (and improperly), whichever side the juror believes is better supported by the evidence previously presented.

Although we claim that predecisional distortion is a bias, would most courts agree? When it comes to reaching a conclusion before all the evidence has been seen and weighed, court mandates are clear and uniform: Such conclusions are to be avoided. Possibly, the main reason for this prohibition against premature judgment is to avoid the interpretation of new evidence in a way that is unduly favorable toward that judgment. Because the predecisional distortion of evidence that we investigate here is, in essence, the same undesirable phenomenon, it seems likely that most courts would agree that it qualifies as a bias that should be prevented.

As an example of predecisional distortion in a legal trial, imagine that two different jurors, Juror D and Juror P, are presented with a new piece of evidence midway through a trial. Further assume, both here and throughout what follows, that there is one obvious verdict associated with each side of the case, generically, guilt–culpability or innocence. Both jurors have observed the same evidence up to this point in the trial. However, Juror D sees the defendant's case as superior so far, whereas in Juror P's mind the plaintiff is currently leading. Suppose that Juror D (Juror P) evaluates the new evidence as more favorable to the defendant's (plaintiff's) case than would a group of jurors who found the evidence up to that point sufficiently balanced that they had not established a tentatively leading verdict. Thus, both jurors distort the new evidence toward their respective current leaders and away

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Kurt A. Carlson and J. Edward Russo, Johnson Graduate School of Management, Cornell University.

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Correspondence concerning this article should be addressed to Kurt A. Carlson, Johnson Graduate School of Management, Cornell University, Ithaca, New York 14853-6201 until July 31, 2001. As of August 1, 2001, correspondence concerning this article should be addressed to Kurt A. Carlson, Fuqua School of Business, Duke University, Durham, North Carolina 27708-0120. Electronic mail may be sent to kac20@cornell.edu.

from its leader-free probative value. Note that for any single juror, this distortion might be explained by an idiosyncratic interpretation of the evidence that just happens to support that juror's currently leading verdict. However, over multiple pieces of evidence, idiosyncratic variations in evaluations should average out and yield distortions that systematically favor the defendant for Juror D and the plaintiff for Juror P.

The resulting leader-based distortion is predecisional for two reasons. First, mock jurors are not committed to their developing inclination (i.e., to the tentatively leading verdict) until the final piece of evidence is seen and they announce a final verdict (or, in the case of real juries, they enter into deliberation in order to reach a final verdict). Second, other studies have shown that, in fact, many participants switch their leading alternative at least once during the decision process (e.g., Russo, Meloy, & Medvec, 1998). Thus, it cannot be accounted for as postdecisional distortion based on the reduction of cognitive dissonance (Festinger, 1957). It is also worth noting that Russo et al. (1996, 1998) have found that predecisional distortion is twice as great as the familiar postdecisional kind.

It is useful to distinguish predecisional distortion from the distortion of evidence that follows from prior beliefs. In the legal setting, generic prior beliefs held by jurors are that the defendant is either usually innocent or usually guilty—culpable. The essential claims of predecisional distortion are that it is the leading and not final choice that produces distortion and that the leading side can emerge solely from the information presented without recourse to any impact of prior beliefs. It is the absence of these two forces, a premature (final) decision and biasing prior beliefs, that makes the phenomenon of predecisional distortion interesting, even novel, in the legal setting.

This raises the question of whether such distortion might exist at all during the evaluation of legal evidence. Recent work suggests predecisional distortion might occur, even in the absence of early choice or prior beliefs (Meloy, 2000; Russo et al., 1998; Russo, Meloy, & Wilks, 2000). In these studies, decision makers were sequentially presented with attributes for a pair of alternatives from which they eventually chose one. The researchers tracked which alternative was leading at each point in the decision process and found that new information was distorted to favor the current leader. The present study investigates whether the evaluation of evidence in legal trials is susceptible to the same predecisional distortion observed in preferential choice.

### Background

Most studies of evidence evaluation in legal cases have focused on factors that influence the evaluation process. These include pretrial publicity (Otto, Penrod, & Dexter, 1994), attractiveness of the victim (Kerr, 1978), judges' instructions to the jury (Elwork et al., 1977; ForsterLee et al., 1993), stereotypes (Bodenhausen, 1988), the presentation order of evidence (Kassin, Reddy, & Tulloch, 1990; Kerstholt & Jackson, 1998), the requested damage award (Hastie, Schkade, & Payne, 1999), or bail recommendation (Dhami & Ayton, 2001). What seems to have been overlooked in all of this work is the possibility that jurors naturally establish a tentative favorite side (or leading verdict) early in the trial and then evaluate new evidence as overly supportive of that currently leading verdict.

The various models of the juror decision process are silent on the possible occurrence of predecisional distortion. In the classic evidence updating models, the weight given to a piece of evidence is determined (in part) by assessments of prior evidence (e.g., Einhorn & Hogarth, 1985; Ostrom, Werner, & Saks, 1978; Schum & Du Charme, 1971). These models all presume jurors' unbiased interpretation of the new information, followed by a reweighting of this evidence as it is aggregated to form the juror's decision. As such, in their present form, these evidence-updating models do not predict jurors' distortion of evidence to favor a tentatively leading party.

Does predecisional distortion violate the principles of Bayesian inference? Necessarily, that depends on what one means by *Bayesian*. Arguably, the standard interpretation assumes (a) that all prior evidence is reflected in a prior distribution over the key variable(s); (b) that new evidence is combined with that prior distribution to yield an updated (posterior) distribution; and (c) that, finally and most crucially of all, prior and new evidence make independent contributions to the posterior distribution (e.g., Rust, Inman, & Zahorik, 1998). The latter means specifically that the prior distribution does not influence the interpretation of the new evidence. Of course, such prohibited influence is exactly the phenomenon of predecisional distortion, where the prior distribution is the leading verdict based on all previous evidence.

If the Bayesian view is extended to include the ability of the prior distribution to alter the evaluation of a new datum (i.e., a new piece of evidence), then predecisional distortion becomes compatible with the Bayesian view (for a formalization, see Boulding, Kalra, & Staelin, 1999). However, there is a price for this. Our account of the decision process predicts that order effects should result from the strategic placement of information, and, indeed, Russo, Carlson, and Meloy (2001) observed such order effects in consumer choice.<sup>1</sup> Although, as noted above, a more liberal Bayesian account provides for such a finding, the normative status of such an account, especially in a legal setting, would likely be sacrificed. In summary, it seems difficult to reconcile predecisional distortion with standard Bayesian inference that claims a normative status. However, at the cost of this status, a more behaviorally realistic Bayesian updating process can encompass predecisional distortion.

Pennington and Hastie's (1986, 1992) story model, arguably the currently dominant model of juror decision making, does not presently include any mechanism like predecisional distortion to facilitate the emergence of one story over the others. The story model predicts that jurors construct one or more narratives from a combination of the trial evidence, world knowledge, and expectations of what makes a story complete. These authors have argued that, during the course of a trial, one story emerges as most acceptable on the basis of coverage, coherence, and uniqueness. A

<sup>1</sup> Russo, Carlson, and Meloy (2001) provided participants with six attributes (in sequence) for a pair of products. The first attribute favored the "targeted" alternative, the fourth favored the other alternative, and the remaining four attributes favored neither, on average. The targeted alternative was varied (between participants) by interchanging the first and fourth attributes. Results showed that the selection rate of the targeted alternative was roughly 70%, an impact that was traced to the distortion of the attribute information.

juror's verdict is the one that most closely matches the most coherent story. Though Pennington and Hastie acknowledged that jurors have some knowledge of the possible verdicts during the trial, they suggested that most of this information comes after all the evidence has been presented in the form of the judge's instructions to the jury. Thus, because the alternative verdict categories are not fully known to jurors in advance, these decision alternatives are assumed not to play a large role in story construction. As a result, the story model does not (in its current form) account for predecisional distortion.

In summary, little research has explored the details of the process that jurors use in the on-line interpretation of evidence. More specifically, no prior research, whether empirical or theoretical, has considered jurors' developing opinion toward a currently leading verdict as a source of the biased evaluation of new trial evidence. At the same time, the existing work is not so much hostile to the phenomenon of predecisional distortion as silent regarding its possible presence.

### Hypotheses

Though predecisional distortion has been found elsewhere, there are several reasons why it may not occur during a trial. First, *triers* (i.e., judges and jurors, but hereinafter referring only to jurors) are aware that juror decisions are supposed to be based on the evidence. Indeed, everyone connected with the jurisprudential process is, or should be, aware of this standard of good legal decision making. In contrast, the "right" answer in a preferential choice, if that term can be used at all, is a function of personal preference. It is not necessarily a matter of fact or logic or evidence. Second, in legal trials the magnitude of the consequences is much greater than in decisions made by consumers. Although predecisional distortion has been studied for choices with real incentives, such as a cash payment for accuracy (Meloy, Russo, & Gelfand, 2001) and actually receiving the product chosen (Carlson & Klein, 2001), the consequences of these decisions are dwarfed by those of legal trials. Finally, in addition to these inherent forces against the distortion of trial evidence, jurors are explicitly instructed to avoid taking sides prematurely. One goal of both juror orientation and the judge's preliminary instructions is to convey the importance of suspending judgment until all the evidence has been presented and an appropriate discussion has occurred in the privacy of the jury room. Further, jurors try hard to follow instructions and genuinely want to make the correct decision (Steele & Thornburg, 1988).

Despite the above, there are reasons to believe that predecisional distortion of evidence might occur in typical civil and criminal cases. First, it is well-known that prior position influences verdicts and that it does so presumably through some kind of bias in the evaluation of evidence (Babcock & Loewenstein, 1997; Diamond, 1993). Might not a developing position, even if tentative and reversible, have a similar influence? Second, even when jurors are largely aware of their prior leanings, they seem unable to fully overcome them. We believe that people are largely unaware of predecisional distortion. Therefore, jurors' predecisional distortion of trial evidence may occur for the simple reason that they cannot correct an error they are not aware they are committing. This is consistent with Wegener and Petty's (1995) *flexible correction* account, which argues that people can correct for a judgmental bias only if they are aware of it and are motivated to correct it. Mainly

because most people are unaware of predecisional distortion and, therefore, have difficulty defending against it, we expect that predecisional distortion will occur in legal trials. Thus, Hypothesis 1 is that people distort evidence predecisionally when reaching a verdict in a lawsuit.

### Confidence

Earlier studies of predecisional distortion have shown that the magnitude of distortion varies closely with the confidence in the current leader (e.g., Russo et al., 1998; Russo et al., 2000). That is, the rated confidence that the currently leading alternative will ultimately prove superior consistently predicts the degree to which the next piece of information is distorted. Generalizing this finding to the evaluation of evidence in a legal trial yields our next hypothesis: Hypothesis 2 is that higher confidence in the currently favored verdict leads to greater distortion of the next piece of evidence.

### Influence of Prior Beliefs on Case Decisions

It is well-known that jurors' prior beliefs influence their decisions (Hart, Evans, Wissler, Feehan, & Saks, 1997; Smith, 1991, 1993). Even when warned, jurors are often unable to ignore their preconceptions when evaluating trial evidence (Babcock & Loewenstein, 1997). In the context of a civil lawsuit, the overarching prior belief is a juror's presumed likelihood (a priori) that the case evidence will favor one side over the other. This is the general predisposition, or base rate, in favor of one party. Consistent with the literature on the influence of prior beliefs, we believe that people will evaluate information and reach verdicts that are consistent with their prior beliefs. Thus, Hypothesis 3 is that prior beliefs influence the case verdict.

Two experiments were used to test these hypotheses. In Experiment 1 we studied students to investigate predecisional distortion in mock civil and criminal trials, and in Experiment 2 we studied prospective jurors in a mock civil trial.

### Experiment 1

#### Method

#### Stimuli and Task

The materials and procedures used in both experiments were identical, with the few exceptions described in the *Procedure* section of Experiment 2. Both studies required participants to make judgments as if they were serving as triers in a real case. Stimuli were adapted from two mock trials, prepared for recent competitions between high school teams in New York state. Both trials, one civil and one criminal, were sufficiently rich in detail to be realistic, and in neither case was it obvious which verdict was correct. The civil case was a lawsuit brought by the grandmother (plaintiff) of a teenage accident victim against the owner (defendant) of the company that had built a porch on which an accident had occurred. The criminal case was a pretrial hearing to determine the admissibility of cocaine seized by the State of New York (plaintiff) from a teenager (defendant) during the search of a motor vehicle. We modified the case materials so that each mock case had three sections: background, six witness affidavits, and a verdict page. The Appendix contains one of the affidavits used in the mock civil trial.

These adapted mock cases differed from real trials in several respects. Specifically, the information consisted of written affidavits (not actual or videotaped testimony), opening arguments were presented in a highly modified form as described below, closing arguments were excluded, the judge's instructions to the jury were not provided prior to the participant's choice of a verdict, and jury deliberation was ignored. These departures were necessary to permit the tracing of the information evaluation process with as little confounding as possible. Regarding the absence of predeliberation jury instructions, because our focus was on predecisional distortion, we traced preverdict information processing. The resulting verdicts may lack external validity in that they were arrived at without jury deliberation and reference to a judge's instructions. However, because our participants' verdicts were intended to represent their positions as they had developed during the evidence evaluation process, the omission of jury instructions and jury deliberation does not undermine their usefulness.

**Case background.** The background section began with an explanation of a civil or criminal trial, depending on which case was being presented. Two questions then assessed participants' prior beliefs by asking for their general opinion of a typical plaintiff's case in this type of trial. One question used for the civil case was "In what proportion of civil cases do you think the plaintiff has a legitimate claim deserving of a financial settlement from the defendant?" Immediately after responding, participants were warned to ignore their "overall guess about the legitimacy of civil claims" and to base their subsequent judgment "strictly on the evidence contained" in the materials to be presented.

The second page of the case background contained four subsections. The first presented the case facts to which both parties agreed. The second and third subsections conveyed the plaintiff's and the defendant's contentions. These paragraphs captured counsels' opening arguments, though in a less strongly worded form. The final section of the background page described the task. For the civil suit, participants were asked to role-play a juror and were told that they could decide in favor of either the plaintiff or the defendant. Note that they did not provide a damage award, only a decision concerning whether the plaintiff merited such an award. In the criminal case, participants were asked to role-play a judge and were told they could find the evidence either admissible (side with the state) or inadmissible (side with the defendant).

The final page of the case background contained three questions to collect participants' assessment of the background information. (The exact wording of these questions is contained in the Appendix.) The responses to these questions, which were also posed after each affidavit, provided the main data used to test the hypotheses. The first question asked participants to judge which party was favored by the current information: In the civil trial, the 9-point response scale was anchored by the plaintiff's name on the low end and the defendant's name on the high end; in the criminal case, it was anchored by *Suppress the evidence* on the low end and *Admit the evidence* on the high end. The second question asked which party, and therefore which verdict, the participant was leaning toward at this time. The question was phrased in terms of a race between two political candidates to emphasize that the decision process was ongoing and that the current leader was tentative. The third question recorded the participant's confidence that the current leader would eventually win the race. The response scale ranged from 50%, *It's dead even. (The two parties are neck and neck.)*, to 100%, *Clear winner. (The leader will win the case.)*

**Witness affidavits.** For both cases, six witness affidavits (three for each side) were presented sequentially, each on its own page. Each affidavit provided mostly new information about the case, but there was always some information that overlapped with other affidavits. Orders of the six affidavits were counterbalanced so that each witness's affidavit appeared in each of the six possible serial positions with equal frequency. The counterbalancing made use of three patterns and six rotated orders to yield a total of 18 unique orders. The three patterns yielded no differences of interest and are not discussed further.

**Verdict page.** Following the final affidavit, a page indicated that no further information would be forthcoming. Participants were instructed to reach a decision by considering all the information (without looking back). They were then asked to state their confidence in their decision on a 50% to 100% scale of confidence. Last, participants were asked to rate each affidavit for both believability and importance on two scales that ranged from 1 (*Not Believable/Not Important*) to 5 (*Very Believable/Very Important*).

## Participants

Participants were 127 undergraduate students at a university in the eastern United States, who were awarded extra course credit for their participation. They were naive regarding the purpose and hypotheses of the study. Participants were scheduled in groups of 7 to 15 and worked individually. Of the 127 participants, 126 provided useful data for the civil case and 122 for the criminal case. Participant cases were eliminated only for failure to provide responses to any of the evaluation or leadership questions. Disqualified participant cases did not enter into any of the analyses reported below and are not discussed further.

## Procedure

On arrival, participants were informed that they would be deciding two cases, a civil case and a criminal case. Participants were then shown a 20-min videotape (Wisconsin Office of Court Operations, 1994) that explained the trial process and the juror's role in a jury trial. The videotape was developed by Wisconsin's Director of the Office of State Courts and was shown to prospective jurors in Wisconsin's state and county courts in 1998. It included specific instructions regarding how jurors should process the evidence presented. For example, on three separate occasions the videotape's narrator emphasized that jurors should refrain from reaching "hasty opinions or conclusions" until "all the evidence" had been presented. The narrator also discouraged jurors from holding onto opinions too firmly: "Do not hesitate to change your opinion if your reason and judgment change during deliberation."

After viewing the videotape, each participant was given a stimulus packet. Participants were instructed to proceed through the materials at their own pace and to work through the packet sequentially without looking ahead or back. Participants spent an average of 15 min per case and typically finished the entire study in about 55 min. Attached to the last page of the second case was a written debriefing that described the purpose of the experiment and thanked participants for their contribution to the study. The second case was always the criminal case because we knew that the prospective jurors (Experiment 2) would decide only the civil case. Placing this case first for the students maximized the comparability of the two samples.

## Measuring Information Distortion

For each trial, all participants evaluated the probative impact of seven units of information, namely, the case background and the six affidavits. Distortion measures were calculated by subtracting from each assessment an estimate of its probative value (hereinafter called the *leader-free diagnosticity*) and signing the difference on the basis of leadership. The leader-free diagnosticity was removed to reveal each participant's distortion of the particular unit of evidence. As an example, consider an affidavit that slightly favored the plaintiff's case. If a participant rated this affidavit as slightly favoring the plaintiff's case, his or her evaluation was undistorted. Alternatively, any participant who rated this affidavit as neutral would have distorted the affidavit toward the defendant. If the defendant had been leading when the affidavit was read, the resulting distortion would have been positive, because an undersupportive evaluation of a proplaintiff affidavit would have favored the current leader (i.e., the de-

fendant). More generally, Participant's evaluation of Affidavit's appearing in the  $k$ th serial position ( $Eval_{ij}^k$ ) and the estimated leader-free diagnosticity of Affidavit ( $LeaderFree_j$ , described below) were used to calculate Participant's absolute distortion,  $|Eval_{ij}^k - LeaderFree_j|$ . These distortion measures were signed by a variable ( $Sign_{ij}^k$ ) that took a value +1 if  $(Eval_{ij}^k - LeaderFree_j)$  favored the verdict leading after Affidavit $_{k-1}$  (or the case background) and the value -1 if it favored the trailing verdict. The only exception occurred when the confidence in the prior leader was 50%. Then  $Sign_{ij}^k$  was recoded as missing, and distortion was not calculated for the next piece of evidence.

The case background information was presented prior to the affidavits in order to provide participants with a meaningful context in which to evaluate the evidence. However, this created a problem for obtaining the leader-free diagnosticity estimates of the affidavits. Specifically, it eliminated the possibility of using participants' evaluations of the first affidavit to estimate leader-free diagnosticities. Note that, had it not been for the (necessary) case background, there would have been no leader prior to whichever affidavit fell in the first position, and hence no leadership-driven distortion to bias their evaluations. However, because of the background information, we had to adopt a different procedure for obtaining these estimates.

The procedure took advantage of the fact that different verdicts were leading at different serial positions. Thus, any bias in  $Eval_{ij}^k$  caused by predecisional distortion could be removed, on average, by computing the mean of  $Eval_{ij}^k$  for each leading party and averaging these two values. To improve this estimate, we also conditioned the means on confidence because it was expected that greater confidence would yield greater distortion (recall Hypothesis 2).  $Eval_{ij}^k$  was computed for each affidavit with prior confidence of 50% and twice (to reflect the two possible leading verdicts) for each of the three confidence intervals, 51%–60%, 61%–70%, and 71%–80%. Confidence levels above 80% were omitted to avoid small samples and extreme evaluations, which were common at high confidence levels. The pairs of  $Eval_{ij}^k$  were averaged for all three levels of confidence above 50%. Then these three means were averaged with  $Eval_{ij}^k$  from the 50% confidence group to yield each affidavit's leader-free diagnosticity ( $LeaderFree_j$ ). This method assumes that the impact of leadership on distortion is symmetric across the two parties. Although we saw no compelling reason to expect any asymmetry, we explored the ramifications of this assumption by calculating distortion from other estimates of  $LeaderFree_j$ , including (a) using only the observations where prior confidence was 50% (i.e., when there was no leading verdict prior to reading the affidavit) and (b) using only observations where prior confidence was low, specifically between 40% and 60%. Neither of these alternative methods resulted in distortions that were different from those obtained by the method above (all  $p$ s > .10, two-tailed).

Returning to the estimation method that we believed was best, the resulting values indicated that all six affidavits in both cases contained the intended direction of diagnosticity. Specifically,  $LeaderFree_j$  was less than the neutral midpoint of 5.00 for all three of the plaintiff's affidavits in the civil case (3.63, 2.56, 4.42) and for all three of the defendant's affidavits in the criminal case (3.60, 3.91, 3.82). Similarly, all three of the defendant's affidavits were above 5.00 in the civil case (6.33, 6.11, 6.97) as were all three of the state's affidavits in the criminal case (5.54, 6.09, 5.42). In addition, the evidence as a whole was acceptably balanced across the two parties in that the average  $LeaderFree_j$  over all six affidavits was 5.00 in the civil case and 4.73 in the criminal case (where 5.00 is perfect balance).

## Results

### Hypothesis 1: The Presence of Distortion

Following Russo et al. (1998) and Russo et al. (2000), we present mean distortion over all affidavits and all participants for each case. An alternative approach was to treat participants as the

unit of observation and average the six affidavits' distortions within each participant. Although the latter analysis avoids the assumption of independence of observations within a participant, it disables Hypothesis 2 (the impact of confidence on distortion), which required treating each affidavit as the unit of observation. We judged the value of testing Hypothesis 2 to outweigh the cost of ignoring any systematic between-subjects differences in distortion. Nonetheless, we report the results of both analyses below.

Mean distortions were 0.59 for the civil case and 0.93 for the criminal case, with both values reliably greater than zero,  $t(650) = 8.77, p < .001$  (one-tailed), and  $t(636) = 13.34, p < .001$  (one-tailed), respectively. Even the affidavit in the civil case with the lowest mean distortion (0.35) was reliably greater than zero,  $t(109) = 1.99, p < .05$  (one-tailed). Similarly, the smallest of the six affidavit distortions in the criminal case (0.43) was also significantly greater than zero,  $t(102) = 2.35, p < .01$  (one-tailed). We also examined the mean distortion with each participant as the unit of observation (i.e., averaging over all six affidavits for each participant). The mean of these participant-level distortions across participants was 0.52 for the civil case and 0.88 for the criminal case. As with the disaggregated statistic, both values were reliably greater than zero,  $t(122) = 5.84, p < .001$  (one-tailed), and  $t(118) = 9.07, p < .001$  (one-tailed), respectively. These participant-level calculations also revealed that the sign of the mean distortion was positive for 73% and 77% of participants in the criminal case and the civil case, respectively. Thus, the presence of distortion was far from universal, though it was impossible to determine whether this was mainly due to the random variation (i.e., substantial individual differences in the evaluations of evidence), or to systematic differences in the susceptibility or tendency to distort. Overall, these results provided support for Hypothesis 1, namely, that predecisional distortion would exist in a mock lawsuit.

### Hypothesis 2: Confidence

Did greater confidence lead to more distortion? To answer this question, we regressed distortion for each affidavit on the confidence in the leader that had been reported after the prior affidavit. Note that, as explained above, to measure the influence of participants' intermediate confidence, the multiple observations provided by each person had to be treated as independent. As expected, support was found for the influence of confidence on distortion. The regression analysis yielded a slope of 0.038 for the civil case,  $t(648) = 6.15, p < .001$  (one-tailed), and a slope of 0.016 for the criminal case,  $t(634) = 2.62, p < .01$  (one-tailed). Thus, as in earlier studies, information distortion increased with confidence in the leading alternative.

As might be expected, confidence increased with serial position. However, when both confidence and serial position were included in the regression equation that predicted distortion, there was no reliable effect of serial position beyond that accounted for by confidence. For confidence, the slope was 0.037 for the civil case,  $t(648) = 6.07, p < .001$  (one-tailed), and 0.016 for the criminal case,  $t(633) = 2.55, p < .01$  (one-tailed), whereas serial position did not exceed the usual standard for significance in either equation ( $p > .20$ , one-tailed, for both equations).

### *Hypothesis 3: Influence of Prior Beliefs on Case Decisions*

After viewing all of the information in the civil (criminal) case packet, each participant decided the case for either the plaintiff (prosecution) or the defendant and provided a final confidence measure on a scale with endpoints of 50% and 100%. These two responses were used to create a single continuous variable representing strength of verdict. This measure combined the information available in each participant's verdict with his or her confidence in that verdict to create a 0%–100% scale in which high values (51%–100%) represented individuals who found in favor of the defendant in the civil case or in favor of the state in the criminal case.

Participants' prior beliefs were assessed by the two initial questions regarding the legitimacy of the typical plaintiff's or defendant's case, depending on whether a civil or criminal lawsuit followed. Each participant's response to the question regarding merit of the typical plaintiff's case was averaged with his or her reverse-scaled response to the question regarding the merit of the typical defendant's case. This yielded a single measure of the participant's prior beliefs regarding the merit of a typical plaintiff's case.

To determine the extent to which prior beliefs influenced participants' case decisions, we regressed verdict strength on the prior beliefs measure for both cases separately. This analysis indicated that prior beliefs influenced case decisions in neither the civil case,  $B = 0.043$ ,  $t(122) = 0.32$ ,  $p > .30$  (one-tailed), nor the criminal case  $B = 0.056$ ,  $t(118) = 0.37$ ,  $p > .30$  (one-tailed). That is, students ignored their prior beliefs about the relative merit of typical civil and criminal lawsuits when making their case decisions.

### *Discussion*

The main conclusion of this first study is that predecisional distortion occurs in individual mock jurors' verdicts just as it does in consumer and managerial decisions. Students committed distortion when deciding both civil and criminal mock lawsuits, despite multiple instructions to suspend judgment until all the evidence had been presented. Once distortion was observed, maybe it was not surprising that confidence in the leading verdict predicted its magnitude. Finally, participants seemed to succeed in ignoring their prior beliefs when deciding the cases.

The lack of influence of prior beliefs is heartening because, even if our student participants predecisionally distorted the trial evidence, at least they eliminated nearly all influence of their prior beliefs on the final verdict. At the same time, however, the fact that students exhibited predecisional distortion suggests that conventional debiasing efforts, such as the orientation videotape, may be insufficient to prevent distortion of trial evidence. Although these results indicate that distortion exists in the evidence evaluation stage of juror decision making, there are numerous differences between college students and actual jurors. The former tend to be younger, better educated, and higher in socioeconomic status than typical jurors. The relative youth of college students means that they have, on average, less experience with crime, police, and the courts. Maybe more important, although we did not ask them directly, we can presume that few of the students had actual jury

experience. This may have made it more difficult for them to adopt the mind-set of a juror during the exercise. In addition, people who are called to a courthouse for jury duty and who are shown the state's videotape on how to be a good juror by a court official may take the task more seriously than students in a behavioral experiment administered by a graduate student. In consideration of these possible limitations of our participant population and setting, we replicated Experiment 1 with prospective jurors.

### *Experiment 2*

As in Experiment 1, the focus here was on the predecisional distortion of evidence that arises to support whichever verdict is currently leading in a juror's mind. In Experiment 2 the same three hypotheses were tested but this time with prospective jurors who had just completed juror orientation. In addition to the benefits of greater personal maturity and experience, particularly with crime and the judicial system, there was the seriousness of the court setting. Whatever else may be said about the potential jurors we observed, and as informal as these observations may have been, those reporting for jury duty responded to the setting, personnel, and instructions of the court with complete seriousness.

### *Method*

#### *Participants*

Participants were individuals appearing for jury duty in Kenosha County, Wisconsin. Every Monday at 8 a.m., 50 to 90 prospective jurors reported to the county courthouse for jury duty. At approximately 8:15 a.m. juror orientation began with an introduction by the Clerk of Circuit Courts. The data reported here were collected following orientation at four consecutive juror assemblies in the same month. The same individual, an off-duty bailiff to the court, administered all four sessions. We expected no significant differences across the four sessions, and none were observed. Participants were eliminated for failing to answer any of the seven information evaluation or leadership questions that followed the case background and six affidavits. Omitted observations do not enter into any of the analyses that follow and are not discussed further. A total of 161 prospective jurors volunteered to participate in the study (approximately 60% of those present), but only 148 participants provided sufficiently complete information. We have no reason to believe that willingness to participate would interact with distortion tendencies, but there is no way of knowing whether the voluntary nature of participation resulted in a nonrepresentative sample. Therefore, the data obtained from these participants are qualified by the usual generalization caveats.

Because of time constraints and confidentiality concerns, we were unable to obtain demographic information from the participants. However, we gained some insight into the demographic characteristics of our sample from a survey of prospective jurors taken by Carlson and Hales (2000) at the Kenosha County courthouse approximately 6 months prior to this study. On the basis of this survey, the typical prospective juror was between 40 and 45 years old, with roughly half female and approximately two thirds married. Almost 95% of the sample completed high school, and three fifths had some postsecondary education. Although these characteristics probably described the entire jury pool from which our sample of 161 was drawn, the latter group of volunteers may have differed in unknown ways.

#### *Procedure*

On arrival by the instructed time of 8 a.m., prospective jurors were seated at round tables that accommodated as many as six people. Prospective



tive jurors then read a booklet that explained jury duty. At approximately 8:15 a.m., the Clerk of Circuit Courts welcomed the prospective jurors. Her orientation consisted of an introduction followed by a brief period in which she addressed questions. At approximately 8:20 a.m., prospective jurors were shown the 20-min instructional videotape described in Experiment 1. The study was administered at the conclusion of the videotape.

The experimental procedure differed from that of Experiment 1 in two ways. First, it was made explicit, by both the Clerk of Circuit Courts and the study administrator, that participation was voluntary. As noted above, about 40% declined to participate. Second, because jurors were regularly called to one of the courtrooms at 9 a.m., there was time for only one of two cases to be completed. The civil case was chosen so participants could role-play jurors rather than a judge as was required by the criminal case. Before distributing the experimental instrument, the study administrator read a prepared set of instructions that included the name of the organization conducting the study, a reiteration that participation was voluntary, and a request for quiet and serious attention to the task. Most participants finished in about 15 min.

## Results

### *Hypothesis 1: Distortion of Evidence*

Affidavit diagnosticities and distortions were calculated using the same procedures described in Experiment 1. For completeness, we note that *LeaderFree* values were less than 5.00 for all three of the plaintiff's affidavits (4.05, 3.51, 4.97) and greater than 5.00 for all three of the defendant's affidavits (5.70, 5.61, 5.06).

The main questions of interest were whether prospective jurors would distort and, if they did, whether the magnitude of their distortion would differ from that of students. The mean distortion for prospective jurors was 1.24, a value that was clearly greater than zero,  $t(802) = 18.68$ ,  $p < .001$  (one-tailed). The mean distortions of the six individual affidavits were all reliably greater than zero, with the smallest distortion being 0.72,  $t(133) = 4.81$ ,  $p < .001$  (one-tailed). The comparison of prospective jurors' mean distortion (1.24) with that of students (0.59) revealed a statistically reliable difference,  $t(1430) = 6.82$ ,  $p < .001$  (two-tailed). Again, for completeness, we also computed the overall mean distortion with participant as the unit of observation (by averaging across all six affidavits within each juror). The mean of this statistic over all participants was 1.20. This value was reliably greater than zero,  $t(147) = 12.00$ ,  $p < .001$  (one-tailed). The comparison of students' overall mean distortion (0.52) revealed a statistically reliable difference,  $t(268) = 5.05$ ,  $p < .001$  (two-tailed). That is, prospective jurors in a courthouse environment exhibited about twice the magnitude of students' distortion.

### *Hypothesis 2: Confidence*

Recall that a linear regression of distortion on the immediately prior confidence yielded evidence in support of Hypothesis 2 in the student data. The same analysis here yielded a slope of 0.040,  $t(801) = 7.27$ ,  $p < .001$  (one-tailed), confirming the influence of confidence on distortion. To test for a difference between prospective jurors' and students' (0.038) slopes, we pooled the two samples and regressed distortion on prior confidence and included both a dummy variable for participant and the interaction term. The absence of a significant interaction,  $t(1450) = 0.26$ ,  $p > .50$  (two-tailed), suggested that there was no difference in the impact of confidence on distortion across the samples.

We also compared initial and final confidence levels for the two groups. The mean confidence in the leading verdict after having read only the case background was significantly greater for prospective jurors (72.1% on the 50%–100% scale) than for students (66.7%),  $t(271) = 3.44$ ,  $p < .001$  (two-tailed). Similarly, prospective jurors reported significantly more final confidence in their verdict (78.9%) than did students (74.1%),  $t(266) = 2.82$ ,  $p < .01$  (two-tailed).

Given that prospective jurors displayed higher initial confidence than did students, might their prior beliefs explain this higher confidence? To test this conjecture, we calculated the strength of prior beliefs by computing the absolute value of the difference between each participant's prior belief in the merit of the plaintiff's case and that of the defendant's case. The larger this value, the more strongly the participant's prior beliefs leaned one way or the other. By regressing on this measure each participant's initial confidence (i.e., confidence in the verdict that was leading after only the case background had been presented), we were able to determine the extent to which strength of prior beliefs influenced initial confidence. Prospective jurors exhibited a reliably positive coefficient, 0.118,  $t(134) = 2.35$ ,  $p < .01$  (one-tailed). In contrast, when the same analysis was performed on the student sample, the resulting coefficient ( $-0.006$ , *ns*) was negative. Comparison of the coefficients revealed the latter to be reliably less than the former,  $t(257) = 3.29$ ,  $p < .001$  (two-tailed). This suggests that higher initial confidence in the prospective juror sample was due, in part, to a tendency for these participants to use their prior beliefs to gain confidence early in the decision process. In contrast, students exhibited no relation between these two measures, providing further evidence that students successfully followed instructions to ignore their prior beliefs.

### *Hypothesis 3: Influence of Prior Beliefs on Case Decisions*

As in the student study, we computed each participant's confidence-weighted verdict strength and the measure of prior beliefs regarding the merit of the typical plaintiff's case. Regression of verdict strength on prior beliefs was used to assess the influence that these beliefs had on prospective jurors' verdicts. Unlike the students' results for the civil case, prior beliefs had a significant influence on the final choices made by prospective jurors,  $B = 0.523$ ,  $t(130) = 3.42$ ,  $p < .001$  (one-tailed). A joint-sample regression was used to assess whether the influence of prior beliefs on verdict strength in the civil case differed across the two samples. Results indicated the difference was statistically reliable,  $t(252) = 2.31$ ,  $p < .05$  (two-tailed). That is, prior beliefs were a reliable predictor for prospective jurors, but not for students' decisions, and the differential impact across the two groups was reliable in a joint-sample analysis.

Might prospective jurors simply have started with different prior beliefs than did students? The data suggest not. The mean estimated percentage of the time that a typical plaintiff's case was judged as legitimate was 52% for both prospective jurors and students. This suggested that, although the two groups started (on average) with identical prior beliefs, prospective jurors used their prior beliefs to a greater extent when deciding the case.

To check this claim, we calculated the percentage of agreement between prior belief and final verdict. If the influence of prior

beliefs was overwhelmed by the trial evidence, prior beliefs should not have differed between those who found for the plaintiff and those who found for the defendant. Indeed, the prior beliefs of students who found for the plaintiff (defendant) were that the typical plaintiff's (defendant's) case has merit, a priori, 56.4% (54.3%) of the time. The difference between these percentages was not statistically significant,  $t(70) = 0.68, p > .35$  (one-tailed). In contrast, prospective jurors who decided in favor of the plaintiff held prior beliefs that 58.7% of typical plaintiffs have a case with merit, compared with only 48.3% for those who decided in favor of the defendant. This difference was statistically significant,  $t(110) = 3.61, p < .001$  (one-tailed). Moreover, the variance of the prior beliefs reported by students and jurors did not differ,  $F(124, 135) = 1.06, p > .50$ . In summary, there was ample evidence that prior beliefs influenced the final verdict for prospective jurors but not students, and this appears to be because prospective jurors remained more anchored to those beliefs, not because they started with different ones.

### *Individual Differences in Sensitivity to Type of Evidence*

A possible alternative explanation for the presence of distortion is prior beliefs' creating differential receptivity to the evidence. Those participants who began proplaintiff (prodefendant) interpreted each affidavit as more favorable to the plaintiff (defendant) than did participants who started without a generic position in favor of either side. Such individuals would have been likely both to perceive the plaintiff (defendant) as leading early in the process (leadership) and to have seen most of the affidavits as supportive of their tentatively leading side (distortion). However, the leadership, as in our Hypothesis 1, did not cause the observed distortion. Instead, both phenomena were driven by participants' prior beliefs. Whenever there are enough such people and they are equally distributed on both sides of an issue, the average probative value for a piece of evidence could be found to be intermediate although the actual interpretations of this evidence lay at the two extremes. Under such circumstances, individuals' evidence evaluations would appear to exhibit predecisional distortion even though their tentative leaning toward a verdict did not influence their interpretations of the trial evidence. That is, distortion would derive not from the influence of the tentative leader but rather from an individual's prior beliefs.

To test this alternative hypothesis, we focused on the distortion of those participants who reported balanced prior beliefs. If such participants distorted information predecisionally, then distortion cannot be attributed solely to the existence of individuals with differential receptivity to evidence favoring a prior position. The mean distortion for the student participants with balanced prior beliefs was greater than zero for both the civil (0.52),  $t(28) = 2.95, p < .01$  (one-tailed), and the criminal (0.99),  $t(8) = 4.24, p < .01$  (one-tailed) cases. Furthermore, the mean distortions of those with balanced prior beliefs were not even lower than the means of those with nonneutral prior beliefs (0.52 vs. 0.51 for the civil case and 0.99 vs. 0.87 for the criminal case). Likewise, the mean distortion of prospective jurors with balanced prior beliefs was significantly greater than zero (0.91),  $t(44) = 4.89, p < .001$  (one-tailed). However, this value was reliably lower than that (1.33) for prospective jurors with nonneutral prior positions,  $t(80) = 1.90, p < .05$  (one-tailed). Thus, differential sensitivity to

evidence for one party's case, based on a prior belief for that side, may explain some of the predecisional distortion that was observed, but only for the prospective jurors.

This begged the question: How much of predecisional distortion was accounted for by prior beliefs? To provide an answer, we recoded each participant's prior beliefs as absolute deviations from the balance point of 50–50. The larger this deviation, the more the participant's prior beliefs favored either plaintiffs or defendants in general. Participants' mean distortion was regressed on their absolute deviation for each sample and case. The resulting coefficients were in the incorrect (negative) direction for both student cases. For prospective jurors, a reliably positive coefficient was obtained,  $B = 0.008, t(134) = 1.92, p < .05$  (one-tailed). However, only 2.5% of the variance in prospective jurors' distortion was accounted for by their prior beliefs. These results accorded with the earlier findings regarding the influence of prior beliefs on predecisional distortion, namely, no effect of these beliefs in either student case and a small but significant effect for prospective jurors.

### *Serial Position*

Our data enabled a test of an influence of serial position on choice. Specifically, we used intermediate information evaluations and final choices for the civil case, together with final choice confidence, to test for the well-known effects of primacy and recency in both samples. Primacy exists when early information is given greater weight than subsequent information, and recency when the most recent information is given more weight than the information that preceded it. The equal appearance of each affidavit in all six serial positions provided the opportunity to test for these effects, independent of the content of the information.

The importance of each serial position was estimated in two ways. First, an estimate of impact of serial position on verdict was derived from a regression of verdict strength on the self-reported evaluation ( $Eval_{ij}^L$ ) of each affidavit by serial position. Second, postdecisional importance weights were collected from each participant by asking participants to rate, on a 5-point scale (with higher values indicating greater importance), how important each civil case affidavit had been to their decision. These self-reported weights were useful measures of decision importance only to the extent that participants had been aware of how the affidavits influenced their decisions. Both the coefficients from the regressions and the mean self-reported importance weights are reported in Table 1.

A recency effect seemed evident throughout, whereas support for primacy was uneven at best. For the regression coefficients, primacy and recency were tested separately by comparing the first and last coefficients, respectively, against a linear combination of the middle four. Similarly, for the self-reported importance ratings, primacy and recency effects were tested in an analysis of variance by two planned linear contrasts, the means of the first and last ratings separately contrasted against the mean of the middle four serial positions. Thus, for both self-reported and regression-derived importances and for both jurors and students, we compared Serial Positions 1 and 6 with the mean of Serial Positions 2 through 5.

Three of the four tests of recency yielded reliable effects. For students, both measures of importance exhibited significant re-



Table 1  
*Affidavit Importance by Affidavit Serial Position for the Civil Case*

Importance measure and sample	Affidavit serial position					
	1	2	3	4	5	6
Self-report ( <i>M</i> )						
Students	3.19	3.28	3.20	3.19	3.31	3.49
Prospective jurors	3.39	3.16	3.34	3.49	3.43	3.51
Simultaneous regression estimate ( <i>B</i> )						
Students	3.65**	2.89**	0.98	0.20	2.23*	4.49**
Prospective jurors	1.65*	-0.75	4.09**	1.91	3.01**	4.15**

*Note.* Self-reported importance was measured on a 5-point scale with higher values indicating greater importance. The estimated beta weight for each serial position was tested against the null hypothesis of  $B = 0$  or no effect of that position. The self-reported weights could not be so tested.

\* $p < .05$ , one-tailed. \*\* $p < .01$ , one-tailed.

cency: regression,  $F(1, 119) = 6.73$ ,  $p < .01$  (one-tailed); self-report contrast = 0.246,  $t(750) = 2.084$ ,  $p < .05$  (one-tailed). However, only the regression measure was significant for prospective jurors,  $F(1, 136) = 3.30$ ,  $p < .05$  (one-tailed). Because the regression measure was considered more valid than self-reported importances, we concluded that both students and prospective jurors exhibited recency, but the latter were not consistently aware of having done so. The presence of primacy was reliable only in the regression-derived importances of students,  $F(1, 119) = 3.78$ ,  $p < .05$  (one-tailed). The other three tests for a primacy effect all yielded a null result. In summary, there was consistent evidence of a recency effect in the impact of the trial information for both prospective jurors and students, whereas primacy was reliably observed only for students.

Two types of primacy should be distinguished in this context. Predecisional distortion is similar to Wallsten's (1981) *configural primacy* in which new information is distorted to support the opinion formed up to that point. The more conventional form of primacy, identified only in the students' regression equation above, is defined as giving greater weight to early information. That configural primacy, as measured by predecisional distortion, was so much greater for prospective jurors than for students, says that the early opinions formed by prospective jurors were more influential in the interpretation of later information (compared with those of students). In contrast, students distorted less than jurors but seemed to rely more on traditional primacy (giving greater weight to early information) when deciding the lawsuit.

### General Discussion

The findings of the two experiments can be summarized briefly. First, predecisional distortion of case evidence exists in mock jurors' verdicts, just as it does in other decision contexts. Second, prospective jurors were more biased than students. Indeed, their judgments were as biased as, or more biased than, those of students on nearly every measure: Their judgments showed twice as much distortion on average, greater reliance on their prior beliefs, and more confidence in their tentatively leading verdicts. One might look to age differences to explain the differential influence of prior beliefs across the two samples. Our prospective jurors were older and probably had more stable prior beliefs than our students. Further, given their current status as students, it is possible that

these participants approached the task more analytically, which, in turn, somehow reduced their tendency to distort. However, we can only speculate on the underlying factors driving these differences. Unfortunately, we were unable to collect the demographic information from our prospective juror sample that might have illuminated this issue.

The above results beg two questions. First, why does the distortion of trial evidence occur? Second, is there any way to eliminate it or, at least, to reduce it substantially?

### Why Does Distortion Occur?

We believe that predecisional distortion is driven by the distal goal of coherence. That is, jurors seek to formulate a coherent account of the evidence presented, one that is coherent with their prior beliefs, counsels' opening arguments, the judge's instructions to the jury, and so on. Note that we do not claim that all new evidence not aligned with the currently leading verdict is distorted. On the one hand, it may be dismissed as, for example, when a juror concludes that a witness is lying, or, on the other hand, it may be so powerful that it causes a reversal of the currently leading verdict.

Consider how a coherence-based mechanism for distortion might fit with the story model proffered by Pennington and Hastie (1986, 1992). This model suggests that jurors create competing story lines during the trial, one of which emerges as the story with the greatest overall coherence or acceptability. The story model can be extended to incorporate predecisional distortion, so long as jurors are adequately aware of the potential verdicts from the beginning of the trial (as they were in the cases that we used). If it is assumed that jurors develop a tentatively preferred verdict as the trial progresses, the leading verdict can influence story construction as follows: Driven by the goal of coherence, new evidence is distorted toward the currently leading verdict to make it more compatible with the currently dominant story. Though the story model (in its current form) assigns to the verdict categories relatively little influence over the story construction process, it could be easily altered to account for our findings.

Nevertheless, we suggest that a similar but simpler mechanism might also suffice. Jurors need only harmonize new evidence with the currently leading verdict by distorting the evidence to conform to the emerging story that supports the leading verdict. Unlike the

story model's presumption of multiple stories, we suggest that at any time during a trial, there is a dominant story, or rather a leading verdict and a corresponding story, that best accounts for the evidence. New evidence must be assimilated into that story, even if it means changing the story so radically that a different verdict emerges as the leader. As with the story model, we believe that a goal of coherence drives the resolution of conflicts among units of evidence. However, in contrast to the story model, we add distortion of the evidence as one tactic for enhancing coherence, and we suggest that one dominant story, rather than multiple parallel ones, may be sufficient. Thus, compared with the story model, we provide one more coherence-building tool (i.e., predecisional distortion of evidence), and we lighten jurors' memorial and computational burdens (i.e., to one working story rather than several). This said, we have no evidence against the story model. Maybe jurors do, in fact, use its more complete, effortful, and conscious process. Indeed, where the alternative verdicts are not known to jurors at a trial's start, multiple stories may be needed and our simplified process may not apply.

### *Can Distortion Be Eliminated?*

Why did efforts such as the orientation session and the instructional videotape fail to prevent predecisional distortion? We suggest that the problem is a lack of awareness of this bias. These efforts to debias evidence evaluation did not specifically warn against predecisional distortion. Further, they did not even warn against the development of a tentatively preferred side during the presentation of evidence. Finally, in the absence of a warning, people seem not to be aware of their own tendency to predecisionally distort new information.

This raises the following question: If jurors could be made aware of predecisional distortion by a warning, could this bias be eliminated or, at least, reduced? We have affirmative evidence from a study conducted with Margaret Meloy (Carlson, Russo, & Meloy, 2001). Baseball enthusiasts predicted the winner of the season's series (13 games) between two actual but unidentified major league baseball teams. Decision makers then assessed the extent to which they had exhibited either oversupport of the leader (predecisional distortion) or undersupport of the leader (the reverse of predecisional distortion). Note that in a sports context, undersupport of the leader is rooting for the underdog, which is as familiar a phenomenon as backing a winner. Results revealed that, following a warning to avoid both over- and undersupport of the leading team, participants were able to eliminate predecisional distortion.

Nonetheless, optimism regarding the effectiveness of a warning to eliminate predecisional distortion in legal judgments should be guarded. First, success remains to be demonstrated. Second, we must acknowledge the possibility that a warning could create reverse distortion, in which some jurors would give the trailing verdict too much "benefit of the doubt." However, this reverse distortion seems less likely in a trial than in the relative evaluation of sports teams, where rooting for the underdog is common. Finally, and more optimistically, we note that a warning need not succeed in the same way in a trial as it did in the sports decision, namely, by balancing over- and undersupport of the leading alternative. Instead, it might enhance the general cognitive rigor of jurors as they evaluate new evidence and integrate it into what they

already know. Greater analytic rigor, in turn, might reduce predecisional distortion and, possibly, other biases as well. However, all this remains to be tested empirically.

### *Limitations and Implications*

The above must be qualified by the limitations of our experimental technique. First, though the psychological consequences for the jurors in a real trial can be substantial, there were no consequences for the participants in the two studies reported above. However, we note that after turning in their case materials, several participants inquired as to which side should have won. Thus, at least some of our participants seemed to be trying to arrive at the correct verdict. Further, there is evidence that students provide similar responses in mock jury studies whether they believe the case they are deciding to be real or hypothetical (Kerr, Nerenz, & Herrick, 1979). Second, there were several factors (mentioned previously) that were not present in our experiments but would have been present in a real trial. Despite these limitations, we consider several implications of our findings.

### *Jury Instructions*

The effectiveness of jury instructions is a traditional area of concern (Elwork et al., 1977). Research has repeatedly demonstrated that jurors fail to heed jury instructions that are typically provided after all the evidence has been presented (Diamond, 1993; Smith, 1993). However, there is also evidence that jury instructions are more effective when presented before the evidence is seen (Bourgeois, Horowitz, Lee, & Grahe, 1995; ForsterLee et al., 1993; Kassin & Wrightsman, 1979). If, as we have argued above, jurors predecisionally distort case evidence as it is presented, and if jurors are largely unaware that they have done so, then one would expect instructions provided after the evidence has been seen to fail and instructions provided before the evidence is seen to offer a greater chance of success. Once jurors have distorted the evidence, it may be impossible for them to reconstruct an unbiased version of that same evidence. Thus, once jurors have distorted their evaluation of the evidence, any instructions to deal with that evidence in certain salutary ways are applied to the distorted evidence, not to the evidence as it would have appeared in the absence of predecisional distortion. As such, attempts to undo jurors' distortion of trial evidence are likely to be fruitless. Instead, the recommendation is that courts extend their instruction against premature decisions to include the formation of any overall leaning toward one side or the other until all the evidence and arguments have been heard. Maybe it would help to explain to jurors how even a tentative leaning can influence how new evidence is perceived. In short, the essence of our view is that any form of overall judgment should be delayed as long as possible.

### *Entrenchment of a Tentative Verdict*

A strongly held schematic representation of trial evidence can give way to an unreasonable entrenchment in one's position. Of course, in many cases, these intransigent opinions can be traced to beliefs held prior to jury duty. However, predecisional distortion may make an unappreciated contribution to the irrational entrenchment of jurors' positions. Because jurors are not aware of their

own leader-based distortion, they believe that the evidence itself provides clear support for their position. Thus, the lack of awareness of predecisional distortion means that jurors who come to different interpretations of trial evidence may be thoroughly convinced of their correctness and wholly unsympathetic to other jurors who draw the opposite conclusion from the same evidence.

For simplicity, consider a jury with negligible prior beliefs, either because of the novelty of the case itself or the careful selection of jurors by counsel for both sides (i.e., screening out those with strong prior beliefs for either side). Suppose, further, that at the end of the presentation of evidence, the jurors are roughly split in their preferred verdicts. Predecisional distortion might account for such a split if, early in the trial, different jurors were guided by relatively small interpretive differences in the evidence to prefer opposite verdicts. Then jurors would have perceived evidence to support these early (and opposite) leanings. Because hung juries tend to result when jurors have widely varied schematic representations (Holstein, 1985), predecisional distortion in the face of different initial leanings may be one cause of such impasses.

### Order Effects

Perhaps the most worrisome implication of predecisional distortion is its potential, combined with an order effect, to influence the verdict itself. Russo, Carlson, and Meloy (2001) showed that information presentation order can lead individuals to choose a targeted brand. They established a particular brand as the leader and then let the distortion of subsequent product information build support for that targeted brand. Presumably, these order effects would transfer to jurors' evidence evaluations just as the present study showed that distortion did. Indeed, Pennington and Hastie (1988) already demonstrated that evidence order can influence verdicts by dictating story construction. Future experimental research could explore whether distortion-induced order effects can be captured in mock legal settings.

### Jury Deliberation

An interesting second direction of future experimentation would be to examine the influence of jury deliberation on the tendency of jurors to hold positions supported by predeliberation distortion of the case evidence. The key question in such work would be whether deliberation would rectify such distortion-based beliefs or would only reinforce them through the process of publicly defending these sincerely held positions.

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## Appendix

### Example of Stimulus Materials

#### Civil Case Affidavit of Georgia Floyd (Plaintiff)

My name is Georgia Floyd. My husband, Frank, and I have spent the last fifteen years in our home on Harrison Street. Frank is an invalid, confined to a wheel chair. We thought it would be just perfect if we could have a small porch off our back door, so that Frank and I could sit out there a little each day.

Shortly after we made that decision, I heard an ad on the radio for beautiful redwood porches, installed in just days. I called and made an appointment for Mr. Baldwin to come to our home. Mr. Baldwin seemed young, but he was earnest and he promised to do a good job and to use master carpenters. He said he'd start the work soon, and that if we signed up quickly, we'd get his discount rate of \$2,500 for the whole job. Frank and I were thrilled, and we signed immediately, giving Baldwin a \$500 deposit.

After two months of waiting, a Ms. Smith showed up at our door. She said that she was a master carpenter, and that she was ready to begin work on our porch. We were hesitant, but when she showed us her certificate of master carpentry, we decided to let her

go ahead. I watched her carefully and she seemed to know what she was doing. On the third day, a Mr. Warsley showed up and told us that he was replacing Ms. Smith on the job. He wasn't a master carpenter, but Frank and I were so eager to have the porch finished that we let him continue the job. Warsley finished the porch in two more days. The next day Baldwin came around to collect his fee. He inspected the porch and said it was fine, so I wrote him a check for the \$2,000 balance.

About a month later, my grandson Mark and his friend Phil came to spend the day with us. Mark is fifteen years old, but he is small for a boy his age and weighs only about 115 pounds. Mark and Phil were playing around on the porch and got into some silly argument. I looked out the back door to tell them to settle down. Just then, I saw Phil give Mark a push—nothing too hard, mind you—and Mark fell up against the railing. Well, imagine my horror when I saw the entire railing tear loose from the porch post! Mark fell onto the cement below; it's a miracle he wasn't hurt worse.

Please consider ONLY THE INFORMATION on this page. Rate it on the scale below according to your judgment. The information on this page strongly favors (circle one number):

1                      2                      3                      4                      5                      6                      7                      8                      9  
Mrs. Floyd's                      Neither                      Mr. Baldwin's  
Case                      Party                      Case

Please think about this case as a primary election between two candidates from your political party. The winner of this race gets to challenge the incumbent candidate from the other party. Think of the parties in this lawsuit as the two candidates in the primary election. Imagine that the race is already in progress. Considering ALL THE INFORMATION that you've seen to this point, which of the individuals would you consider to be in the lead right now? (Circle one)

Mrs. Floyd

Mr. Baldwin

If you were given \$10 to place a bet on which of the two individuals would win this political race, knowing that the race is still in progress, how would you split the \$10 between the two parties in this lawsuit? Considering ALL THE INFORMATION you have read so far, use the scale below to indicate how much you would bet on the "leading" individual to win the case.

\$5                      \$6                      \$7                      \$8                      \$9                      \$10  
It's dead even.                      Clear winner.  
(The two parties are                      (The leader will  
neck and neck.)                      win the case.)

Note. From "Mock Trial: Floyd v. Baldwin (a consumer home repair case)," by P. McGwire, 1984, *National Institute for Citizen Education in the Law*. Original materials developed by Street Law, Inc. Adapted with permission.

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