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JUROR DISCUSSIONS DURING CIVIL TRIALS:
STUDYING AN ARIZONA INNOVATION

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I. INTRODUCTION

Institutions change slowly. The American jury, embedded in the United States Constitution¹ with roots in the 13th century,² is no exception. During the past decade, however, the winds of innovation emanating from Arizona have brought a series of procedural changes to the American jury trial. The changes emerged from the work of an unusual committee convened by the Arizona Supreme Court and charged with reform of the Arizona jury trial system.³ Beginning with a close examination of jury trials, the Arizona Supreme Court Committee on the More

1. U.S. CONST. art. III, § 2, cl. 3 ("the trial of all crimes, except in cases of impeachment, shall be by jury"); U.S. CONST. amend. VI ("In all criminal prosecutions the accused shall enjoy the right to a speedy and public trial, by an impartial jury . . ."); U.S. CONST. amend. VII ("In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved . . .").

2. THOMAS A. GREEN, VERDICT ACCORDING TO CONSCIENCE: PERSPECTIVES ON THE ENGLISH CRIMINAL TRIAL JURY 1200-1800 (1985).

3. B. Michael Dann & George Logan III, *Jury Reform: The Arizona Experience*, 79 JUDICATURE 280 (1996) (describing the committee's explicit charge to make innovative recommendations).

Effective Use of Juries⁴ identified aspects of the trial process that might interfere with optimal jury performance. The Committee then asked how procedures might be changed. It drew on educational and psychological research, consulted with former jurors, and applied lessons from the members' own courtroom observations. The result was *Jurors: The Power of 12*, a detailed report which recommended a series of 55 changes intended to improve the jury system, including 28 changes pertaining explicitly to trial procedure.⁵

In contrast to many committee reports, *Jurors: The Power of 12* resulted in a substantial number of changes in jury trial procedures. And, consistent with its interest in innovation, the Arizona judiciary endorsed experimentation to evaluate the most controversial of the changes that had been recommended and implemented. That change explicitly invited jurors to discuss the evidence at trial among themselves during breaks, replacing the traditional rule that forbade such discussions.⁶ The innovation attracted substantial enthusiasm and criticism, as well as widespread interest outside of Arizona.⁷

This Article describes the results of the experiment stimulated by the Pima County Superior Court in Tucson and supported by the Arizona Supreme Court to evaluate the Discussions innovation. A unique feature of this experiment among

4. The Committee was chaired by Judge B. Michael Dann and composed of trial and appellate court judges, attorneys, court administrators, and former jurors.

5. ARIZ. SUPREME COURT COMM. ON MORE EFFECTIVE USE OF JURIES, *JURORS: THE POWER OF 12* (1994) [hereinafter *JURORS: THE POWER OF 12*] (the 13 recommendations that were adopted in Arizona Supreme Court rule changes included expanded use of preliminary jury instructions (#30), allowing jurors to ask questions during trial (#34), and allowing the jurors to discuss the evidence among themselves during the trial (#37)); Dann & Logan, *supra* note 3, at 283 (describing rule changes); ARIZ. R. CIV. P. 39.

6. No jurisdiction had explicitly permitted juror discussions in civil cases, and a body of case law prohibited such juror discussions in criminal cases. See Valerie P. Hans et al., *The Arizona Jury Reform Permitting Civil Jury Trial Discussions: The Views of Trial Participants, Judges and Jurors*, 32 U. MICH. J.L. REFORM 349 (1999). For an assertion about the long practice of forbidding juror discussion in criminal cases, see *Winebrenner v. United States* 147 F.2d 322, 329 (8th Cir. 1945) (recognizing "the generally accepted principle that it is improper for jurors to discuss a case prior to its submission to them").

7. Colorado, Maryland, and Florida are in the process of considering pilot studies on rule changes to allow pre-deliberation discussions similar to those in Arizona. REBECCA L. KOURLIS & CLAUS J. HUME, COLORADO COMMITTEE REPORT TO CHIEF JUSTICE ANTHONY F. VOLLACK §§ 15-17, 20 (Aug. 1996); J. FREDERICK SHARER ET AL., COUNCIL ON JURY USE AND MANAGEMENT, ADMINISTRATIVE OFFICE OF MARYLAND COURTS, REPORT AND RECOMMENDATIONS 8 (Apr. 2000), available at <http://www.mdarchives.state.md.us/msa/mdmanual/33jud/defunct/html/05jury.html> (last visited Nov. 1, 2002); ROBERT SEVIN ET AL., JUDICIAL MANAGEMENT COUNCIL FINAL REPORT TO THE SUPREME COURT OF FLORIDA 8 (May 2001), available at <http://www.flcourts.org/pubinfo/documents/JuryInnovationsFinalReport.pdf> (last visited Nov. 1, 2002). In Massachusetts, at least one judge permits jury discussion in civil cases. FLASCHNER JUDICIAL INSTITUTE, *JURY TRIAL INNOVATIONS IN MASSACHUSETTS* 43 (Peter M. Lauriat ed., 2000). Delaware's jury reform commission report included a recommendation to allow civil jurors to discuss the evidence among themselves during trial. JOHN E. BABIARZ, JR. ET AL., DELAWARE SUPERIOR COURT REPORT OF THE TASK FORCE ON THE MORE EFFECTIVE USE OF JURIES (1998), available at <http://www.dsba.org/tfrep.htm> (last visited Oct. 27, 2002) (as of December 31, 2001, this recommendation had not been adopted).

research on juries is that an Arizona Supreme Court Order⁸ permitted us to videotape 50 civil trials and the discussions and deliberations of the juries. These videotapes, described in detail in Part III, made it possible to directly assess not only outcomes of the innovation, but also the processes that led to those outcomes. Additional data included questionnaires administered to the jurors, the judge, and the attorneys. The court also provided copies of exhibits and other written documents that were part of the trial record.

We begin in Part II by describing the Discussions innovation and the debate it stimulated. The debate included a variety of opposing claims about the likely effects of discussion. These claims informed our assessment of the innovation. We also summarize some of the findings from an earlier study of the Discussions innovation conducted by Hannaford, Hans, and Munsterman.⁹ Their study, which involved post-trial questionnaires with jurors rather than the direct assessment methodology of the present research, provides an important comparative base for some of our analyses. In Part III, we describe the present study and its methodology. We note some of the important strengths of the experimental method, and some of the weaknesses associated with a sample size of 50 cases. In Part IV, we begin presenting the results, describing the opportunities for discussion presented by the breaks in the trial, the degree to which jurors avail themselves of those opportunities and the extent to which jurors comply with judicial admonitions about the conditions under which discussion is permitted under Arizona's innovation. We then focus in Part V on what jurors actually talk about during discussions, examining the information exchange process, and the extent to which the information exchanges improve juror comprehension of the trial evidence. Part VI considers the crucial question of the extent to which the jurors follow the judge's instructions to reserve judgment on the ultimate verdict when they are allowed to discuss the evidence during trial. Then, in Part VII, we test the effects of discussions on the course of deliberations: the timing of the first vote, the speed in reaching a verdict, the verdicts themselves, and the extent to which early verdict statements predict voting preferences in deliberations. We also compare the verdicts of the Discuss and No Discuss juries with the verdict that the trial judge probably would have rendered in a bench trial. Further, we assess the effect of the opportunity to discuss the evidence on jury questions and ease of comprehension. Finally, we examine the degree to which discussion affects juror morale, jury cohesiveness, and the perceived legitimacy of the trial process.

Part VIII, the concluding section, summarizes the findings and presents several suggestions about how courts should modify their procedures in order to maximize the benefits and minimize the costs associated with discussions during trial.

8. Supreme Court of Arizona Administrative Order 98-10 (Feb. 5, 1998), available at <http://www.supreme.state.az.us/orders/admorder/orders99/pdf98/9810.pdf> (last visited Oct. 27, 2002).

9. Paula L. Hannaford et al., *Permitting Jury Discussions During Trial: Impact of the Arizona Reform*, 24 LAW & HUM. BEHAV. 359 (2000) [hereinafter Hannaford et al., *Permitting Jury Discussions*]; Paula L. Hannaford-Agor et al., "Speaking Rights": *Evaluating Juror Discussions During Civil Trials*, 85 JUDICATURE 237 (2002); Hans et al., *supra* note 6.

II. RATIONALE AND DEBATE ABOUT JUROR DISCUSSIONS DURING TRIAL

A. *The Proposal and Rule 39(f)*

Jurors: The Power of 12 offered, and the Arizona judiciary accepted, the following proposal:

Allow Jurors to Discuss the Evidence Among Themselves During the Trial. After being admonished not to decide the case until they have heard all the evidence, instructions of law and arguments of counsel, jurors should also be told, at the trial's outset, that they are permitted to discuss the evidence among themselves in the jury room during recesses.¹⁰

The Committee recommended that discussion be permitted in both civil and criminal trials, but the Supreme Court subsequently adopted it only for civil trials as Rule 39(f) of the Arizona Rules of Civil Procedure. The rule reads as follows:

If the jurors are permitted to separate during the trial, they shall be admonished by the court that it is their duty to not converse with or permit themselves to be addressed by any person on any subject connected with the trial; except that the jurors shall be instructed that they will be permitted to discuss the evidence among themselves in the jury room during recesses from the trial when all are present, as long as they reserve judgment about the outcome of the case until deliberations commence. Notwithstanding the foregoing, the jurors' discussions of the evidence among themselves during recesses may be limited or prohibited by the court for good cause.¹¹

10. JURORS: THE POWER OF 12, *supra* note 5, at 96.

11. ARIZ. R. CIV. P. 39(f). The implementation of the rule in the jury instruction is typically formulated by judges in the Arizona Superior Court as follows:

You jurors may discuss the evidence during the trial, but only among yourselves and only in the jury room when all of you are present. Despite what you have heard or experienced in other trials, where jurors cannot discuss the evidence among themselves during the trial, that rule has been changed in Arizona to permit jurors to talk with each other about the evidence during civil trials like this one. The reason for this change is that the courts believe that juror discussions during trial may assist jurors in understanding and recalling the witnesses, their testimony and exhibits. The kinds of things you may discuss include the witnesses, their testimony and exhibits. However, you must be very careful not to discuss or make up your minds about the final outcome, or who should win the case, until you have heard everything—all the evidence, the final instructions on the law and the attorneys' arguments—and your deliberations have begun. Obviously, it would be unfair and unwise to decide the case until you have heard everything.

See ROGER W. KAUFMAN & MICHAEL R. MCVEY, REVISED ARIZONA JURY INSTRUCTIONS (CIVIL), INSTRUCTION 7 (3d ed. 1997) [hereinafter REVISED ARIZONA JURY INSTRUCTIONS].

B. The Rationale for Rule 39(f)

The rationale offered in *Jurors: The Power of 12* for permitting discussion had four elements:

- a. Juror comprehension will be enhanced, given the benefits of interactive communication;
- b. Questions can be asked and impressions shared on a timely basis rather than held until deliberations or forgotten;
- c. A juror's tentative or preliminary judgments might surface and be tested by the group's knowledge; and
- d. Divisive "fugitive" conversations and cliques might be reduced, given the opportunities for "venting" in the presence of the entire jury in the jury room.¹²

Both Rule 39(f) and several other jury innovations that were adopted following *Jurors: The Power of 12*¹³ reflect the recognition that jurors are not the passive recipients of trial evidence portrayed in legal writings and judicial opinions.¹⁴ Rather, as psychological research has demonstrated, jurors are active processors of information.¹⁵ Even under traditional trial procedure that requires the jurors to keep their thoughts to themselves until the end of evidence and instructions from the judge, the jurors are active in processing information in the light of their pre-existing experience and attitudes. A juror who misunderstands a piece of evidence may form an inaccurate impression that colors the way that subsequent evidence is interpreted. In theory, if other jurors can correct the mis-impression on a timely basis, the subsequent error will be avoided. Moreover, psychological research indicates that persons who are more active during the listening and processing phase of a learning task tend to have better comprehension and involvement than persons who are forced to be passive.¹⁶ Thus, the argument is that by allowing jurors a degree of participation in the trial they will be motivated to have greater involvement and to be more accurate fact finders.

The rationales for Rule 39(f) that predict enhanced juror comprehension and the benefits of using other jurors as resources for information (points (a), (b), and (c), above) were therefore based on an assumption that, by discussing evidence as it occurs in the trial rather than waiting until deliberations, the jurors will correct factual

12. JURORS: THE POWER OF 12, *supra* note 5, at 97-98.

13. Rule 39(p) instructs jurors that they are permitted to take notes during trial. ARIZ. R. CIV. P. 39(p). Rule 39(b)(10) states that jurors have the right to ask questions of witnesses by submitting written questions to the judge who will vet them for legal acceptability before presenting them to the witness. *Id.* at 39(b)(10). This right is qualified further in that the questions ordinarily are considered at the end of the witness' testimony and must be submitted to the judge before the witness is dismissed by the court.

14. B. Michael Dann, "Learning Lessons" and "Speaking Rights": Creating Educated and Democratic Juries, 68 IND. L.J. 1229, 1240 (1993).

15. *Id.* See also, Hans et al., *supra* note 6; Shari S. Diamond & Jonathan D. Casper, *Blindfolding the Jury to Verdict Consequences: Damages, Experts, and the Civil Jury*, 26 LAW & SOC'Y REV. 513 (1992).

16. See studies reviewed in Steven I. Friedland, *The Competency and Responsibility of Jurors in Deciding Cases*, 85 NW. U. L. REV. 190, 209-18 (1990).

errors that some may hold. In addition, jurors will accurately solidify in their minds evidence that might otherwise be forgotten. An individual juror may have misunderstood a particular piece of testimony and formed an opinion about it. Under a no-discussion admonition, the mis-impression may affect the juror's judgment about that issue and possibly affect reactions to subsequent testimony as well. When the juror finally is able to discuss the matter during deliberations, the judgment may have been irrevocably cemented into the impression, the basis of the misunderstanding may have been clouded by other trial evidence, or the other jurors may not recall specific details about the testimony that might persuade the juror of his misunderstanding. In contrast, if jurors are allowed to discuss the evidence while it is fresh in their minds, such misunderstandings might be more easily corrected because other jurors can address the mis-impression. Moreover, as *Jurors: The Power of 12* suggested, discussion with other jurors might evoke reminders of the judge's admonition to avoid drawing premature conclusions. Indeed, the mere fact of discovering that other jurors do not necessarily see the evidence in the same way may serve as a caution against making premature judgments. Additionally, by discussing the evidence as it occurs, the jurors may have it better fixed in their own minds and be able to recall it more easily when deliberations begin. Further, the sharing of impressions will allow the jurors to test the accuracy of those impressions against the impressions of other jurors and will permit them to voice issues that are troubling them about the evidence.

Rule 39(b)(10) regarding the jurors' right to ask witnesses questions is implicated by the discussion rule. The rationale behind question asking is that, from a juror's perspective, there may be testimony that he or she does not understand, or may have difficulty placing in the context of other trial evidence. In addition, there may be gaps in the testimony that the juror believes are important.¹⁷ Juror questions can help to clarify confusing issues or fill in these missing gaps. By allowing discussion of the evidence during breaks, jurors can examine and clear up points of confusion, test their concerns with other members of the jury, and decide if further clarification is necessary. Discussion potentially allows collaboration on questions that should be asked when the testimony resumes.

Point (d) in the rationales for the rule (i.e., preventing fugitive conversations) was stimulated in part by information on one case in which a court learned that a jury developed cliques because some jurors who car pooled to court during a trial formed opinions about the evidence during discussions that excluded the other jurors. If jurors discuss the case only as a group, such factions can be avoided.

Other concerns have been voiced that jurors sometimes discuss the evidence with family or friends during the trial, in large part because the traditional jury instructions prevent them from communicating with the other jurors. There are many anecdotes about this activity, but there is little systematic evidence bearing on the

17. These gaps may be due to a poorly prepared witness or lawyer not conveying things the jury believes may be important. Alternatively, a well-prepared lawyer or witness may be so familiar with the case that they make inferential leaps that are not obvious to someone who is unfamiliar with the case. On the other hand, the gaps may be due to exclusions under the rules of evidence or intentional exclusion of certain evidence by a party exercising prerogatives under the adversary system.

degree to which it occurs.¹⁸ Nevertheless, allowing jurors to discuss the case with fellow jurors might alleviate any need to discuss the matter outside the jury room. Alternatively, relaxing the strict rule about discussion might lower juror inhibitions and encourage them to discuss the evidence outside the courtroom.

In theory, jury discussions might also result in better deliberations. If jurors who are allowed to discuss the evidence during the trial are better motivated and have a firmer grasp of the evidence, the quality of their deliberations might be higher than the quality of deliberations by jurors who are instructed not to discuss the case. In practice, measuring quality of deliberations is a subjective undertaking that invites alternative interpretations, but, as discussed below, an objective assessment can be made from some indirect measures which bear on quality.

Finally, because jurors may get to know one another better during the trial and obtain an impression of the fairness or quality of each others' minds, the opportunity to discuss the case in the course of the trial may give the jurors more information on which to base their selection of a foreperson, or "presiding juror."

Rule 39(f) has generated considerable debate that has been discussed in a number of sources.¹⁹ Much of the debate involves empirical assertions, but some of it involves policy issues. The research in this Article is devoted to empirical questions. Therefore, a listing of specific claims made on both sides of the debate is set forth below. Although the listing is partially redundant with the original debate around Rule 39(f), it helps to clearly define the scope of the data and the analyses based on those data, and separates out the other issues that require a normative analysis.

C. Arguments for Juror Discussions During Trial

1. The Primary Claims

In considering the claims about the purported benefits of discussion during trial it is important to immediately draw attention to the fact that proponents of juror discussions have tended to emphasize that the effects will be most useful and pronounced in longer, multi-day or multi-week trials rather than short ones. In most instances, a one- or two-day trial does not present the same problems of memory and confusion as trials extending over longer periods. This does not mean that there will be no benefits in shorter trials, only that the effects should be more pronounced in longer trials.

18. See, e.g., Elizabeth F. Loftus & Douglas Lieber, *Do Jurors Talk?* TRIAL, Jan., 1986, at 59, 60 (estimating that more than 10% of jurors in their research talked about the facts of the case with other jurors, friends or family members during the trial); Natasha K. Lakamp, *Deliberating Juror Predeliberation Discussions: Should California Follow the Arizona Model?*, 45 UCLA L. REV. 845, 853 (1998) (reviewing results from surveys with higher estimates).

19. G. THOMAS MUNSTERMAN ET AL., JURY TRIAL INNOVATIONS (1997); Hans et al., *supra* note 6; Hannaford et al., *Permitting Jury Discussions*, *supra* note 9; Lakamp, *supra* note 18; Robert D. Myers & Gordon M. Griller, *Educating Jurors Means Better Jury Trials: Jury Reform in Arizona*, 36 JUDGES' J. 13 (1997); Janessa E. Shtabsky, *Comment: A More Active Jury: Has Arizona Set the Standard for Reform With Its New Jury Rules?*, 28 ARIZ. ST. L.J. 1009 (1996).

The specific claims are as follows:²⁰

(a) Juror comprehension can be improved by permitting jurors, as a group, to sift through and mentally organize the evidence over the course of a trial.

(b) Discussion can improve juror recollection of evidence and testimony by emphasizing and clarifying important points during the course of the trial.

(c) Discussion allows jurors to collaborate on questions, or at least to attempt to validate their thoughts on which questions ought to be asked.

(d) Other jurors can admonish a juror about reaching premature conclusions. This can have effects not only on the admonished juror but on the other jurors as well by reminding them of the need to keep an open mind until all the evidence and instructions have been presented.

(e) Because jurors find it difficult to adhere to an admonition not to discuss evidence, permission to engage in such discussions bridges the gap between the court's admonitions about forming premature judgments and juror behavior.

(f) Because the instruction tells the jurors they must all be together to engage in discussions, there will not be separate discussions by some factions on the jury resulting in some having formed impressions of the evidence that other jurors do not share.

(g) Allowing discussion will provide an outlet so that jurors do not feel the need to discuss the case with family or friends when the trial is recessed for the day.

(h) Discussion can increase juror motivation and attention during the trial because jurors are active rather than passive participants; this greater involvement will carry into deliberations.

(i) Discussion can increase juror satisfaction by permitting an outlet for jurors to express their impressions of the case before retiring for deliberations.

(j) Discussion can promote greater cohesion and less conflict among the jurors, reducing the amount of time needed for deliberations.

(k) Jurors will get to know each other better and have more information on which to base foreperson selection when deliberations begin.

2. Empirical Assumptions in the Pro-Rule Arguments

The claims about the potential benefits of Rule 39(f) are straightforward empirical assertions, but some are based on assumptions that require closer scrutiny.

The first assumption of the rule is that the jurors will have an opportunity to discuss the evidence. In very short trials there may be few recesses.²¹ In other instances witnesses may testify and be dismissed before a recess takes place. The jurors may, of course, discuss that witness anyway, but the opportunity to collaborate in formulating questions for the witness will be lost.

20. See Dann, *supra* note 14, at 1262; Hans et al., *supra* note 6; Lakamp, *supra* note 18.

21. By the term "recess" we also include periods when jurors arrive in the mornings before they are called to the courtroom and lunch periods.

A second assumption is that jurors will avail themselves of the opportunities that are presented. Yet, some jurors may prefer to have a cigarette, take a long lunch or attend to personal matters during recesses, or they may simply prefer not to discuss the case until deliberations begin. Research by Hannaford et al., based on juror reports in post-trial questionnaires, concluded that in 84 cases in which jurors were allowed to discuss the evidence, 26 of the juries, or 31%, did not do so for one or more of the reasons stated above.

A third assumption is that jurors will follow the judge's instruction that discussion can only be undertaken when all jurors are present. To the extent that jurors adhere to this instruction, a single juror who, for whatever reason, is not present in the jury room during a recess will thwart the desire of other jurors who want to discuss the case. The important empirical question is whether the jurors adhere to the admonition to confine discussions until everyone is present.²²

Another crucial assumption is that jurors can and will follow the part of the instruction that admonishes them not to form premature judgments about the ultimate elements involved in the verdict until they have heard all of the evidence and final arguments and received instructions on the law.

The final claim is that discussion dependably facilitates recall and understanding of evidence, yet discussion increases accuracy only if the group is sharing accurate information.²³ Psychologist Robert MacCoun has asserted that a "danger of formal discussions *during* trial is that jurors will prematurely adopt the same *shared* biases before hearing all of the evidence, undermining some of the benefits of post-trial deliberations."²⁴ In short, more vigorous and robust deliberations may occur when each juror begins deliberations naive as to the opinions held by the other members of the jury.

*D. Arguments Against Juror Discussions During Trial*²⁵

1. The Primary Claims

(a) Discussion may facilitate or encourage the formation or expression of premature judgments about an evidentiary issue or the ultimate issues in the case. The plaintiff's case is advantaged because the plaintiff presents first and the primacy of

22. As will be discussed later in this Article, a question arises as to whether discussion should be brought to a halt when a juror goes to one of the two bathrooms located immediately adjacent to the jury room. The definition of what constitutes an absence is not addressed in the instructions given to jurors.

23. Shari Seidman Diamond & Judith N. Levi, *Improving Decisions on Death by Revising and Testing Jury Instructions*, 79 JUDICATURE 224 (1996).

24. Robert J. MacCoun, *Improving Jury Comprehension in Criminal and Civil Trials*, RAND INST. FOR CIV. JUST. (Rand Testimony Series No. CT-136), July 1995.

25. For sources containing basic arguments against allowing discussion, see *supra* notes 9, 20. Leading criminal cases asserting reasons against allowing discussions are *United States v. Resko*, 3 F.3d 684, 689-90 (3d Cir. 1993); *United States v. Yonn*, 702 F.2d 1341 n.1 (11th Cir. 1983); *United States v. Edwards*, 696 F.2d 1277, 1282 (11th Cir. 1983); and *Winebrenner v. United States*, 147 F.2d 322 (8th Cir. 1945).

this evidence will color the evidence in the plaintiff's favor before the defense has an opportunity to present its case.

(b) Once a juror openly expresses his or her views in the presence of the other jurors, he or she is likely to adhere to that position and will be less likely to change that opinion in the light of subsequent evidence.²⁶

(c) An aggressive, overpowering juror might dominate discussions and have undue influence on the views of others before deliberations begin.

(d) The quality of deliberations may decline as jurors become more familiar with each others' views, restricting deliberations to a narrower and more confined set of issues and thereby thwarting the legal goal of a collective, robust, deliberative process.

(e) Jurors would discuss evidence without benefit of final court instructions on the applicable law.

(f) Active information processing is not uniformly a good thing. It may foster selective recall and cause biased impressions of the evidence. Jurors may adopt the same shared biases before hearing all the evidence, undermining some of the benefits of post-trial deliberation.

(g) Informing the jurors that they may discuss evidence may open the gate to discussion even if not all are present, or it may cause the jurors to drop inhibitions against talking with non-jurors about the case.

(h) Juror stress might increase because of the conflicts produced by prior discussions.

There are two additional arguments against juror discussions that involve policy issues rather than claims that are open to empirical test.

(i) Discussion during trial detracts from the ideal of jurors as neutral decision-makers. Discussion permits them to contest among themselves parts or all of one or both sides' evidence before the whole picture, including instructions on the law, has been set before them. The consequence is an erosion of the adversary process.²⁷

(j) Alternate jurors are not part of the final jury that renders the verdict. However, under discussion instructions, alternate jurors discuss evidence that will play a part in deliberations and thus have an impact on the verdict that only the legally constituted jury should decide.

2. Empirical Assumptions in the Claims of Rule 39(f) Opponents

Opponents of Rule 39(f) seem most concerned that, by being allowed to discuss the case, jurors will form opinions in favor of plaintiffs, who have the opportunity to present their case first. This may then cause a bias against subsequent

26. A number of studies in social psychology indicate that public commitment sometimes makes people more resistant to subsequent changes in their position. *See, e.g.*, ALICE EAGLY & SHELLY CHAIKEN, *THE PSYCHOLOGY OF ATTITUDES* 499-557, 627-63 (1993).

27. STEPHAN LANDSMAN, *READINGS ON ADVERSARIAL JUSTICE: THE AMERICAN APPROACH TO ADJUDICATION* 122-59 (1988).

evidence presented by defendants. That is, there is a bias in favor of whoever goes first, what psychologists refer to as a "primacy effect." This reasoning ignores the fact that defendants as well as plaintiffs make opening statements. Jurors are aware from the beginning that there are two sides to the story.²⁸ Research involving post-trial questionnaires and interviews with jurors in civil cases shows that jurors are generally well-informed about the nature of the adversary process and the existence of opposing views of the case.²⁹

A second assumption of opponents is that the early testimony in the trial is entirely favorable to the plaintiff. It ignores the opportunity for the defense to cross-examine each of the plaintiff's witnesses. Defense counsel thus may explicitly confront the jurors early in the case with weaknesses in the testimony of the plaintiff's evidence. Relatedly, the primacy effect claim, as it is articulated, assumes that the juror's impression of the plaintiff's case will automatically be favorable. However, juror discussion could, in some cases, center around inconsistencies in the plaintiff's version of events or potential lack of credibility of the plaintiff and plaintiff's witnesses. In such cases there is no reason to expect a primacy effect. Indeed, under these conditions, a primacy effect, to the extent that one exists, would disadvantage the plaintiff.

The claims about alleged primacy effects have also ignored an opposite phenomenon, namely a potential "recency" effect. That is, material presented last may be better remembered and more favorably viewed than material presented earlier. Studies of persuasion in other settings have found that under certain conditions recency of presentation can lead to greater influence than primacy of presentation.³⁰ In a classic experiment on primacy and recency effects, Miller and Campbell studied the effects of order of presentation of evidence and temporal delay.³¹ Their vehicle for studying these effects was a civil trial summarizing the plaintiff's and defendant's positions.³² When a short delay occurred between the evidence presentation and the decision, primacy effects occurred.³³ However, when there was a long delay between the two sides' presentations and the decision had to be made immediately after the last presentation, recently presented material was more persuasive.³⁴ Miller and Campbell's experiment was intended to test theoretical issues about persuasion and lacked some of the important characteristics of a real trial, but it raises an alternative view to the primacy effect claim. Equally important, the Hannaford et al. study discussed in Part II.E of this Article produced findings that are consistent with recency effects. In short, the alleged primacy effect is clearly open to an opposing alternative hypothesis. Whether juror discussions during trial produce a primacy

28. Even before opening statements the voir dire process frequently explores issues related to two differing versions of events.

29. NEIL VIDMAR, *MEDICAL MALPRACTICE AND THE AMERICAN JURY 171-72* (1995); Valerie P. Hans & Sanja Kutnjak Ivkovich, *Jurors and Experts*, *ADVOCATE: THE MAGAZINE OF DELAWARE TRIAL LAWYERS*, Summer 1994, at 17.

30. See generally EAGLY & CHAIKEN, *supra* note 26, at 250-55.

31. Norman Miller & Donald T. Campbell, *Recency and Primacy in Persuasion As a Function of the Timing of Speeches and Measurements*, 59 *J. ABNORMAL & SOC. PSYCHOL.* 1 (1959); see also EAGLY & CHAIKEN, *supra* note 26, at 264-72.

32. Miller & Campbell, *supra* note 31, at 3.

33. *Id.* at 4.

34. *Id.*

effect, a recency effect, one of these effects only under certain conditions (e.g., in a long trial), or no effect at all remains very much an open empirical question.

The concern that jurors will form early judgments about the appropriate outcome of the case under Discussion instructions ignores the possibility that they do so even under No Discussion instructions. Hence, the empirical issue is the extent to which Discussion instructions create an effect above and beyond whatever judgments jurors would form under No Discussion instructions.

Concerns that jurors will discuss the case when some members are absent from the jury room or otherwise fail to follow the judge's instructions on proper juror behavior are based on an assumption that jurors do not follow instructions. Yet, critics of Rule 39(f) seem to have faith that jurors do follow the instructions when they are told not to discuss the case. To be sure, it is possible that sanctioning limited discussion reduces juror inhibitions and starts them down the slippery slope toward more extensive discussion of the case in the absence of some jurors or even with friends and family outside the courtroom. At the same time, however, a lack of trust in jurors' ability or willingness to follow judicial instructions leads to the hypothesis that jurors may also disregard the admonition under instructions not to discuss the case. One research study estimated that up to 44% of jurors ignored the admonition to avoid talking about the case.³⁵

Worry that jurors will express a prejudgment and filter subsequent evidence in a contaminated way assumes that a consensus will develop among all jurors. This reasoning ignores the possibility that a juror who forms a prejudgment on an issue and voices it in discussions might be reminded by other jurors that it is inappropriate to reach such a conclusion until all of the evidence is presented. In this latter scenario, discussions would actually serve the role of reducing prejudgment.

Finally, concerns about discussion during trial eroding the adversary process³⁶ and about the legally improper influence of alternate jurors on the verdict are important policy issues, but depend upon normative rather than empirical analysis.

E. The Hannaford, Hans, and Munsterman Study

Hannaford et al. were the first to study the impact of Rule 39(f).³⁷ Their findings address some of the empirical issues raised by the rule and set a background for the present research.

The data for their study involved 161 civil cases from Maricopa, Pima, Mohave, and Yavapai County Superior Courts. Using random assignment, the juries in 85 of these cases were given Rule 39(f) instructions (Discuss cases) and 76 were

35. See Lakamp, *supra* note 18, at 853.

36. In this regard a question arises as to whether Rule 39(b), encouraging jurors to ask questions, is not at least equally intrusive on the adversary process because the jurors who ask questions are not passive decision-makers. ARIZ. R. CIV. P. 39(b). Nonetheless, Rule 39(b) has been much less controversial than Rule 39(f). *Id.* at 39(f). Perhaps the reason lies in the fact that question-asking without discussion occurs in open court and can be controlled by the judge and opposing counsel whereas jury discussions occur out of the presence of the judge and the attorneys.

37. See sources cited *supra* note 5.

given instructions to avoid discussing the evidence during the trial (No Discuss cases). Immediately following the conclusion of the trial, the jurors, the trial judge, attorneys, and litigants filled out questionnaires bearing on the case.

Fully 31% of the Discuss juries reported that they did not discuss the case before deliberation. There is some evidence that many of these trials were short, uncomplicated trials and thus the jurors had fewer opportunities to discuss the case than in longer trials. Other reasons were that not all jurors were in the jury room during the recesses, that some jurors were uncomfortable discussing the case and that some jurors did not understand the judge's instruction that they were allowed to discuss it. In short, jurors did not always avail themselves of the opportunity to discuss the case.

However, Hannaford et al. also found that 31% of the juries in Discuss conditions admitted to informal discussions with other jurors, e.g., discussing the case when not all jurors were present, and 11% admitted that they had discussed the case with family or friends (6% violated both proscriptions). These findings must be contrasted against the reports of jurors in the No Discuss cases: 14% of these jurors indicated that despite the admonition to refrain from discussion they did discuss it with other jurors, and 14% also admitted discussing the trial with family and friends (4% violated both proscriptions). Although being allowed to discuss the case may have had some very marginal effects (11% versus 14%) on the degree to which jurors discussed the case with non-jurors during the trial, the more important finding is that substantial numbers of the jurors in the Discuss conditions appeared to have violated the proscription against talking about the case unless all members were present. Unfortunately, the data did not allow an assessment of the extent of impermissible discussions by jurors during the trial. It may be that the reported informal talk by jurors in the Discuss conditions was nugatory or it may have been substantial. (This is one of the issues that the direct observation of jurors' discussions in the present research is designed to address.)

The Hannaford et al. research also attempted to examine the question of whether Rule 39(f) resulted in prejudgment of the issues. The post-trial juror questionnaire asked three questions intended to shed indirect light on this matter. The jurors were asked when they started leaning toward one side or the other, if they found themselves changing their minds at any stage of the trial, and when they made up their minds about who should prevail in the lawsuit. The Discuss and No Discuss jurors reported no differences in the timing of opinion formation. Further, there were no differences in the jurors' reports of changing their minds. In short, there was no evidence of prejudgment as a result of being allowed to discuss the case.

Notably, there was evidence of individual differences among jurors. Jurors with more education reported starting to lean toward one side earlier, but they also reported changing their minds more frequently than did jurors with less education. Case complexity and the strength of evidence were also related to the indices of prejudgment. In less complex cases and in cases in which there was an imbalance in the strength of evidence, as assessed by the trial judge's evaluation of the case, jurors tended to form opinions earlier than in complex and more evenly balanced cases. The importance of these findings is to remind us that trial complexity and evidence strength are often related to the formation of opinion. Whether jurors are or are not

allowed to discuss the evidence may be less important in simple and evidentially imbalanced trials.

The Hannaford et al. research found no differences in the reported cohesiveness among jurors in Discuss cases, compared to No Discuss cases. In fact, Discuss jurors reported slightly more conflict. Moreover, Discuss juries had a significantly greater proportion of non-unanimous verdicts than did No Discuss juries.³⁸ However, Hannaford et al. found that factors such as case complexity, evidence strength, and domination of discussion by one or two jurors accounted for most of the differences in reported conflict rather than differences between Discuss and No Discuss juries.

Finally, although jurors in Discuss trials reported that discussions were helpful in resolving confusion about evidence, there were no observable differences between Discuss and No Discuss juries in juror reports of understanding the evidence and the law. Both Discuss and No Discuss jurors expressed the same high levels of satisfaction with the verdict they produced. Most importantly, there were no differences between Discuss and No Discuss juries in the degree to which their verdict differed from the one that the trial judge thought proper.

On balance, as the Authors of the research concluded, the data did not support the worst fears of opponents of juror discussions during trial. However, there was evidence that Discuss juries did not uniformly follow the judicial instruction that all jurors must be present for discussion of the evidence.

Although the Hannaford et al. research provides important insights about Rule 39(f), it relies exclusively on juror reports of what happened during the trial and during deliberation. The weakness of post-trial reports is that they are subject to failures of perception or memory and intentional or unconscious biases in reporting.

F. The Present Research

The research described in this Article was designed to avoid the limitations of the Hannaford et al. research by providing a direct window on the processes of discussion and deliberation as well as additional indices of juror behavior and performance. That direct window involved videotaping the actual discussions and deliberations of 50 civil juries, 37 of which were given standard Discuss instructions and 13 of which were given No Discuss instructions. As in all research, any methodology has limitations and these limitations will be discussed in Part III and in the Conclusion to this Article. The substantive findings begin in Part IV.

III. DESCRIPTION AND METHODOLOGY

A. Overview of the Study

To study the discussion and deliberation process directly, the Arizona Supreme Court sanctioned a videotaping project in Pima County. The trials in the study were held in the Pima County Superior Court in Tucson. According to the study

38. Arizona civil jury rules require six of the eight members to agree in order to return a valid verdict. REVISED ARIZONA JURY INSTRUCTIONS, *supra* note 11, at Standard 15.

design, cases were to be randomly assigned to the Discuss and No Discuss conditions, and the jurors in all of the cases involved in the study would be videotaped while they were in the jury room. The project required an elaborate set of permissions and security measures. In addition to the judges who agreed to participate in the project, the jurors, litigants, and attorneys in each case in the study were required to give their consent.³⁹ All participants were informed of the Arizona Supreme Court order that ensures strict confidentiality and limits use of the tapes exclusively to the research sanctioned by the court. The order also allowed a small sub-sample of cases (ultimately 13 of 50 cases) to be randomly assigned to the No Discuss condition with the intent of providing a control comparison for the Discuss condition.⁴⁰

B. Selection of Jurors and Cases

Jurors were told about the videotaping project when they arrived at court for their jury service. If they preferred not to participate, they were assigned to cases not involved in the project. The juror participation rate was over 95%. Attorneys and litigants were less willing to take part in the study. Some attorneys were generally willing to participate when they had a case before one of the participating judges; others consistently refused. The result was a 22% yield among otherwise eligible trials.⁴¹

39. Supreme Court of Arizona Administrative Order 98-10 reads in part: [T]he materials and information collected for the study, including audio and videotapes may be used only for the purposes of scientific and educational research. The Court shall take all measures necessary to ensure confidentiality of all materials. All tapes shall be stored using appropriate security measures. The materials and information collected for the study, including audio and videotapes, shall not be subject to discovery or inspection by the parties or their attorneys, to use as evidence in any case, or for use on appeal.

Supreme Court of Arizona Administrative Order 98-10, *supra* note 8.

As part of their obligations of confidentiality under the Supreme Court Order as well as additional assurances to parties and jurors undertaken by the principal investigators, the Authors of this Article have changed certain details to disguise individual cases. The changes do not, however, affect the substantive nature of the findings that are reported.

40. According to Supreme Court of Arizona Administrative Order 98-10: To facilitate this project, it is necessary to temporarily suspend the mandatory language of current Rule 39(f), Arizona Rules of Civil Procedure, so that trial judges and study administrators can create a control group of jurors drawn from trials in which the former, traditional admonition prohibiting juror discussion of evidence during trial can be given and enforced.

Id.

41. We defined an eligible trial as one that (1) was presided over by a judge who agreed to participate in the project, (2) began at a time when two participating trials were not already occupying the video technician, (3) occurred in a courtroom that had been wired for taping near an available jury room that had also been wired for taping, and (4) was not expected to last longer than twelve days. Two otherwise eligible longer trials were excluded to avoid tying up the video-eligible rooms for an extended period in an effort to maximize the number of cases in the study. To avoid any bias in computing the response rate, we did not include trials that were assigned on the eve of trial to pro tem judges, although we were able to tape four of

C. The Videotaping Procedures

In each case, the entire trial was videotaped from the opening statements to the closing arguments and jury instructions. Arizona does not audiotape or videotape court proceedings, so an unobtrusive camera was installed in each of the courtrooms of participating judges. The camera was focused on the witness box in order to capture as much of what the jurors saw as possible.⁴²

In the jury rooms used for the research, two unobtrusive cameras were mounted in opposite corners of the room at the ceiling level. These cameras made it possible to see jurors seated around the rectangular table on a split screen without disrupting their normal seating arrangement. Unobtrusive ceiling microphones recorded the discussions. An on-site technician was instructed to tape the conversations in the jury room whenever at least two jurors were present.

D. Other Data

In addition to the trial, discussion, and deliberation videotapes, additional data on each trial were collected: exhibits, juror questions (including questions that jurors submitted during the trial but which the judge did not read aloud), judicial instructions on the law, and jury verdict forms. At the end of each trial, each of the trial participants—jurors, judge, and attorneys—were asked to fill out a brief questionnaire on the trial and on their personal reactions to the case. The judge and attorneys were asked to complete their questionnaire while the jury was deliberating, that is, before they knew the jury verdict. The jurors were asked to fill out their questionnaires when they had completed their deliberations.

E. The Final Sample

Complete data were obtained on a sample of 50 cases.⁴³ The sample consisted of 26 (52%) motor vehicle cases, 17 (34%) non-motor vehicle tort cases, four (8%) medical malpractice cases, and three (6%) contract cases. This distribution is nearly identical to the breakdown for civil jury trials for the Pima County Superior Court for the 1996–97 fiscal year: 55% motor vehicle tort cases, 29% non-motor vehicle tort cases, 8% medical malpractice cases, and 8% contract cases.⁴⁴

The 47 tort cases in the total sample varied from the common rear-end collision with a claim of soft tissue injury to cases involving severe and permanent

them. We excluded all of the pro tem cases in computing the response rate because these cases were difficult to track (i.e., permission from the pro tem judges generally could not be solicited in advance, and the pro tem judges often sat in courtrooms that were not camera-ready). We did include the data from these four cases in our analyses of case results.

42. When the camera malfunctioned or was not turned on, it was necessary to order a transcript from the court reporter.

43. One additional case settled during the trial.

44. These statistics were provided by the Court Administrator of the Research Division, Superior Court of Pima County, 1996–97.

injury or death. Plaintiffs received an award in 65% of the cases.⁴⁵ Awards ranged from \$1,000 to \$2.8 million dollars with a median award of \$25,500.

F. Data Coding and Analysis

The opening and closing arguments in each case were transcribed from the trial videotape. A very detailed "roadmap" of the trial was also created from the videotaped trial to describe the actual order in which testimony occurred, to reconstruct in substantial detail what each witness said, and to indicate whether the testimony emerged on direct examination, cross-examination, or re-direct. In addition, the roadmap included any objections from counsel, the outcome of those objections, and the questions that jurors submitted to the judge that were subsequently asked of witnesses along with the witnesses' responses.

Quasi-transcripts were created for all discussions and deliberation periods in order to capture the verbal interactions of the jurors. These quasi-transcripts are quite

45. In our sample, 65% was 30.5 of 47 cases, treating the one hung jury as .5 of a plaintiff verdict and .5 of a defense verdict. The plaintiff win-rate in the sample was higher than the 48% average for all tort jury trials obtained in a national study of 75 urban state courts by the U.S. Department of Justice. Carol J. DeFrances & Marika F.X. Litras, *Civil Trial Cases and Verdicts in Large Counties, 1996*, BUREAU JUST. STAT. BULL. (U.S. Dep't of Justice Office of Justice Programs, Washington, D.C.), Sept. 1999 [hereinafter *U.S. Dep't of Justice Study*]. This appears to be the standard pattern for Pima County. According to data from the National Center for State Courts, plaintiff win-rates in Pima County for 1996 were 75% for motor vehicle jury trials and 42% for jury trials in other tort cases, similar to the 76% and 52% win-rates we obtained in our sample. Valerie P. Hans, *Inside the Black Box: Comment on Diamond and Vidmar*, 87 VA. L. REV. 1917, 1923-25 (2001). Motor vehicle jury trials nationally tend to have a higher than average plaintiff win-rate among tort jury trials (57% versus 37% for jury trials in other tort cases). *U.S. Dep't of Justice Study, supra*, at tbl. 5. Pima County also has an unusually high representation of motor vehicle cases among its tort jury trials, 60% for Pima County versus the national level of 51% estimated in the Department of Justice study, but the higher frequency of motor vehicle cases does not explain the higher overall win-rate for plaintiffs in Pima County in the motor vehicle cases it tries. *U.S. Dep't of Justice Study, supra*. One potential reason for the high win-rate may be that litigants in civil cases in Pima County can appeal from arbitration verdicts and obtain a jury trial de novo. Fourteen of the sixteen cases in our total sample that involved previous arbitration verdicts had previously been plaintiff verdicts and a jury trial was requested by the defendant. Plaintiffs' attorneys in cases in which an arbitrator found for the defendant would have less of an incentive to pursue a jury trial because they operate on a contingent fee basis, thus reducing the number of cases in the sample that might be expected, a priori, to find for the defense. Another possible explanation for the difference in plaintiff win-rates may be the 13% of the 47 tort cases in our sample (six cases) in which a plaintiff verdict was preordained because the defendant admitted some liability for the plaintiff's damages and the only remaining question was how much of the damages were due to the defendant's actions or how much damage the plaintiff actually suffered. Thus, among the 41 tort cases in which liability was contested, the plaintiff win-rate dropped to 23.5 of 41 cases, or 57%. It is unclear how often trials in other jurisdictions involve disputes about damages rather than both damages and liability. This information is not regularly compiled by courts and in their archival study of state court jury verdicts, DeFrances and Litras did not collect this information. *U.S. Dep't of Justice Study, supra*. A fully accurate account would require a case-by-case examination of trial transcripts or jury instructions like the one carried out on our Pima County sample.

detailed in their reporting and in most instances quote directly or closely paraphrase what each juror said. The coding was marked in ten-minute intervals to allow reasonably accurate assessments of the length of time jurors devoted to discussions. The coders who created these transcripts also noted whenever a juror entered or left the room, allowing us to assess the degree to which the jurors followed the admonition to discuss the case only when all jurors are present. These transcripts allow detailed analyses of the content of juror discussions, that is, what jurors said, when, and in the presence of which other jurors. For deliberations, they also allow analyses of when and how the jury reached its verdict. More detail regarding the content analyses is reserved for the discussions of data that are presented in subsequent Parts of this Article.

G. Discuss and No Discuss Comparisons

As described above, the Supreme Court order allowed for a randomly selected group of cases to have the jurors instructed that they could not discuss the case (No Discuss cases). Jurors in some trials who are permitted to discuss the case need not do so, and in some trials no break may occur, or there may be no break when all jurors are present in the jury room. As a result, the research design anticipated that 60% of the cases would be randomly assigned to the Discuss condition and 40% to the No Discuss condition. Due to some alterations in assignment (described below), 37 cases were assigned to the Discuss condition, representing 74% of the 50 cases in the study.

A number of comparisons were undertaken to determine if the randomization procedures produced comparable Discuss and No Discuss cases. The small size of the sample decreased the likelihood that random assignment would produce strictly comparable sets of cases in the Discuss and No Discuss conditions. Two other factors, in addition, threatened to undermine comparability. First, attorneys trying medical malpractice cases were particularly unenthusiastic about participating in the research. Because these cases often involve complex evidence and the potential for large damages, we wanted to maximize our opportunity to learn how jurors used the discussion periods in these cases, so we assigned all four of those in our sample to the Discuss condition. If we subtract these four from the full sample of 50, there were 33 cases in the Discuss condition and 13 cases in the No Discuss condition.

The second factor that threatened the comparability of the Discuss and No Discuss cases was a preference among some judges for the Discuss condition. Although the cases should have been assigned strictly by chance to the Discuss and No Discuss conditions, the judge in at least one instance was reluctant to deprive the jurors and parties in a complex case of what the judge viewed as an advantageous innovation. Rather than lose the case, it was assigned to the Discuss condition. This case was one of only four non-malpractice cases in the sample that involved a trial with more than 35 hours of testimony, argument, and instructions. All four of these lengthy, non-malpractice cases involved plaintiff damage requests of over \$500,000.

More importantly, these eight cases (four medical malpractice plus four other lengthy cases) differed from the remaining cases in the sample on another important measure. The judges rated the evidence, expert testimony, and instructions in the eight lengthy or medical malpractice cases as substantially more complex than in the

remaining cases in the sample.⁴⁶ The eight trials averaged 51.7 hours in length, three times the average (17.0 hours) of the remaining trials.⁴⁷ Because only one of these eight complex cases had been randomly assigned to the No Discuss condition, we were left with seven complex cases in the Discuss condition and only one in the No Discuss condition, that is, with a single No Discuss case for the complex cases. One unexpected benefit arose from this distortion in random assignment: we were able to examine the process of discussion in a larger sample of complex cases (seven) in which jurors were all permitted to discuss the case than would have been available had random assignment proceeded without any attorney and judicial resistance. These seven cases warranted particular scrutiny because the Discuss innovation was expected to provide the greatest assistance for jurors when they are assigned to long and complicated cases.

The primary analysis of the experiment excluded the eight unusually complex cases and focused on the 42 cases that were assigned to the Discuss or No Discuss conditions according to the random assignment procedure. We thus were able to compare the remaining 30 Discuss cases with the remaining 12 No Discuss cases. We refer to these 42 cases as the "Random Assignment" cases.

We begin by examining the characteristics of these 42 cases to assess the extent to which the two remaining sets of cases were comparable. The comparisons reveal substantial similarity between the two groups of cases on a variety of dimensions, which we report in detail in the Appendix to this Article. To summarize, for both Discuss and No Discuss cases, the distribution of case type was similar; for each, the majority of cases concerned motor vehicle accidents. Further, nearly all plaintiffs were individuals rather than businesses, although both Discuss and No Discuss cases had a substantial minority of cases in which businesses were defendants. Some liability was admitted in a minority of cases, and the number of witnesses, experts and exhibits for each side were comparable across both Discuss and No Discuss cases. The cases were rated similarly on ease of comprehension measures and on perceived skill of the attorneys. Finally, trial length averaged 16.4 hours for the Discuss cases and 18.5 hours for the No Discuss cases. No statistically significant differences between the two sets of cases were found on any measure, although we note that only an extremely large difference could have been detected in so small a sample.

In sum, the small sample of cases in the comparison group ($n = 12$) limits our ability to draw strong conclusions attributing any differences in outcomes between the two sets of cases to the opportunity to discuss the case during the trial. Nonetheless, because random assignment generally succeeded in producing two sets of cases that have similar characteristics and were rated similarly by the judges in the study, we can

46. We asked the judge in each case to rate the ease of comprehending the evidence, the expert testimony, and the instructions on a scale from 1 = extremely difficult to 7 = extremely easy. The gap between the eight lengthy and medical malpractice cases we identified as complex and the remaining 42 cases in the sample averaged approximately 2 full points on all three measures: on the evidence, 2.75 for the complex cases and 5.49 for the remaining cases ($t_{47} = -5.66, p < .001$); on expert testimony, 2.75 for the complex cases and 5.14 for the others ($t_{41} = -4.55, p < .001$); and on instructions, 3.50 for the complex cases and 5.41 for the others ($t_{47} = -4.06, p < .001$).

47. $t_{48(\text{unequal variances})} = 7.31, p < .002$.

use the No Discuss cases to assist us in evaluating how the opportunity to discuss the case during the trial affected the behavior of the jurors in the Discuss cases.

H. The Camera's Effects on the Jurors

An additional methodological issue that can affect our evaluation of the opportunity for jurors to discuss the case is the potential role played by the cameras in the jury room. A necessary condition of the study was that the jurors were aware that their discussions and deliberations were being recorded. Did that awareness cause them to behave differently than if there had been no cameras? No totally satisfactory answer can be provided to this question. Without comparable videotaped discussions and deliberations obtained without juror consent, we cannot know for sure how the jurors would have acted if they had not been told about the cameras. Nonetheless, there are a number of reasons for the research team's overall conclusion that, with one important exception, any effects the recordings had were generally minimal.

From the quasi-transcripts of the discussions, we counted all juror-initiated references to the camera during discussions.⁴⁸ In the 48 cases in which breaks occurred during the trial,⁴⁹ the median number of ten-minute periods in which two or more jurors were in the jury room was 16.5 (mean = 23.6). The median number of those periods containing a reference to the camera was two (mean = 2.8). Several juries seemed especially camera conscious. Five of them mentioned the camera in more than five periods: one jury in 12 of 25 periods, one in 19 of 92 periods, one in eight of 32 periods, one in eight of 42 periods, and one in six of 14 periods. The remaining 43 juries made fewer camera references, nine of them never mentioning the camera and another ten mentioning it only once. References to the camera often occurred when two to five jurors were in the jury room as early arrivals at the beginning of the day or at the end of the lunch break. Only rarely did jurors mention the camera when they were discussing the trial evidence.

Noticing and mentioning the camera does not automatically lead to a conclusion that jurors were altering their behavior for the camera's benefit or that they were not reactive to the camera if they failed to mention it. More telling is the content of their discussions. Some of the comments about the camera were quite incidental. For example, in one case the jurors were talking about the weather when another juror arrived. Someone in the group asked, "Did everybody smile and wave at the camera?" In another case, a juror wanted to know the time and asked whether there was a clock. Another juror responded, "Just look up at the camera and tell them." Others acknowledged the potential embarrassment of a revelation being disclosed: "Three days and nine people for this. No wonder the court system's so backed up. . . . It's ridiculous. For being educated professionals [the lawyers], (excuse me if the camera's on or not) they're disorganized." Even on those juries with relatively high camera mentions, the jurors were often brutally candid about their impressions of litigants and their witnesses, the lawyers and the judge. For example, in some cases jurors made snide comments about such matters as a litigant's weight problem or veracity, an

48. We did not count the occasional references made by a bailiff to the filming project.

49. In two cases no breaks occurred in which the jurors returned to the jury room and had an opportunity for discussion to be filmed.

expert witness' poor communication skills or intellectual capacity, the perceived obnoxiousness or incompetence of a lawyer, or a judge who was thought to be balancing his checkbook instead of giving attention to trial proceedings. The jurors frequently complained sarcastically about the slow progress and redundancy of witness testimony and, on occasion, spoke sharply to one another about an opposing view. Consistent with other research on the effects of recordings on behavior,⁵⁰ in both discussions and deliberations once the jurors focused on the trial task before them, the cameras appeared to be forgotten.

One potential exception to this general conclusion about the minimal effects of the cameras involves adherence to the court's admonitions about discussing the case. First, camera awareness may have caused some of the juries in the Discuss conditions to discuss the case only when all jurors were present. As will be described in Part IV, however, the admonition was frequently violated, suggesting that the camera did not influence the behavior of most jurors. In at least one jury that strictly adhered to the rule to discuss only when everyone was present, however, there were hints that the presence of the camera influenced their behavior.

We also cannot rule out the possibility that one of the reasons that some No Discuss juries did not discuss the trial is because of the surveillance of the camera. Recall that the Hannaford et al. study indicated that 14% of their No Discuss jurors reported discussing the case in the course of the trial. However, our observations of the actual behavior of the jurors in the No Discuss cases suggest that the camera did not prevent most of the juries from engaging in some case discussion. In 69% of the No Discuss cases (nine of the 13),⁵¹ there was some mention of the case by at least one of the jurors, and in 46% of these cases (six out of 13), multiple discussions occurred. No doubt some of the jurors simply forgot the admonition not to discuss the case, but it is clear that whether they forgot the admonition or merely chose to ignore it, concerns about the camera did not prevent them from talking about the case.

IV. JUROR USE OF THE OPPORTUNITY TO DISCUSS THE EVIDENCE AND COMPLIANCE WITH RULE 39(F)

Part II raised the important issue of the extent to which jurors would actually have the opportunity to discuss the trial evidence and whether and how often they took advantage of this opportunity. A central point of interest involves the degree to which Discuss jurors followed the admonition to discuss the case only when all members were present. A second question arises about the degree to which No Discuss jurors refrained from talking about the trial. A related issue involves the degree, if any, to which jurors in Discuss and No Discuss conditions had trial conversations with family or friends during the trial.

50. Karl Weick, *Systematic Observational Methods*, in 2 THE HANDBOOK OF SOCIAL PSYCHOLOGY 372 (Gardner Lindzey & Elliot Aronson eds., 2d ed. 1968).

51. These 13 cases include the single complex case assigned to the No Discuss condition.

A. Measuring Opportunity to Discuss the Evidence

Recall from Part III that the trials varied in length. In the 42 Random Assignment cases (the 30 Discuss and 12 No Discuss conditions), the lengths of evidence, arguments and instructions ranged from 6.2 hours to 32.3 hours. The additional eight complex cases varied from 22.3 hours to 77.5 hours. Obviously, the number of opportunities to discuss the evidence varied with trial length: longer trials equaled greater numbers of trial breaks. The length of discussion opportunities also varied, depending on the time that jurors entered the jury room in the morning or after lunch before being called back to court, or the amount of time the court needed to settle legal matters during regular morning and afternoon trial recesses.

To take this variability into account, we coded discussion opportunities in ten-minute periods. The counting of periods began when two or more jurors entered the jury room and ended when only one or no juror was in the jury room. We then coded whether jurors discussed the trial during the ten-minute period and whether all were present in the jury room.

B. Measuring What Constitutes Impermissible Talking About the Case

In order to assess whether or how often jurors discussed the case, either when they were instructed that case discussion was permitted (i.e., in the Discuss cases when all jurors were present) or when case discussion was prohibited, it was necessary to categorize all juror statements as either "about the case" or not about the case. At first glance, it may appear simple to determine whether a juror statement was about the case—and in most instances, the decision was clear: a juror said, "That witness clearly lied in saying that the light was green" (about the case) versus "The weather today is miserable" (not about the case). Other statements, however, were more ambiguous. To classify them, we defined "talking about the case" as any mention of an issue that was tied to the substantive aspects of the particular case, including: testimony, exhibits, the behavior or reactions of witnesses while they are testifying, instructions from the judge, or opening/closing statements from attorneys. Thus, statements had to pertain to issues that were specific to the case and had to concern one of the substantive domains that we delineated. This definition easily eliminated observations such as, "The judge looks so bored," which may be specific to the case but which did not concern substantive aspects of the trial. For the same reason, a comment about an attorney's behavior, such as, "The plaintiff's attorney keeps looking over at us to see how we're reacting," was not considered talking about the case. The same was true for brief remarks about the procedure of the trial (i.e., what is going to happen in the case), such as "I wonder if the doctor is going to testify today."⁵²

A related definitional issue is whether a single comment or series of statements about the case without response by any other juror constitutes discussion. No response from other jurors could indicate that they disagree or simply that they are ignoring the remark, but it could also indicate agreement. In any event, such remarks

52. The statement would have been regarded as talking about the case if the juror had referenced particular evidentiary issues the doctor might discuss, e.g., "I wonder if the doctor is going to clear up this controversy about the plaintiff's knee injury today."

provide the other jurors with information about the impressions of the juror who made the remark. Consequently, we counted single remarks that evoked no response from other jurors as trial discussion unless otherwise indicated.

C. Potential Opportunities to Discuss the Case

The 50 cases in the sample ranged from 0 to 92 periods in which jurors could discuss the case. The juries had, on average, 22.6 periods per case for possible discussion (an average of 190.4 minutes per case). The 30 Random Assignment Discuss juries had, on average, 14.7 periods per case (124.1 minutes per case) in which they could potentially discuss the case, ranging from as few as 0 and as many as 32 periods.⁵³ In contrast, the 12 No Discuss juries had, on average, 15.8 periods per case (133 minutes per case, ranging from 2 to 38 periods) to discuss the evidence.⁵⁴ The seven complex Discuss cases had many more opportunities for discussion: an average of 58.4 periods per case (491 minutes per case, ranging from 26 to 85 periods.)

Potential opportunities to discuss the case involve instances in which two or more jurors were present in the jury room. These figures provide the baseline against which we can assess trial discussions generally and trial discussions in compliance with Rule 39(f).

D. Frequency of Juror Discussions

To evaluate how often jurors discussed the case, the number of ten-minute periods in which one or more comments on the evidence were made was divided by the number of periods in which two or more jurors were present in the jury room.⁵⁵ This procedure takes into consideration the length of the case.

The vast majority of the Random Assignment Discuss juries, 25 out of 28,⁵⁶ or 89%, included at least one juror who mentioned the evidence at least once, and in many instances discussion of the evidence consumed the whole period. Comments about the evidence were not confined to the Discuss juries, however. Among the No Discuss juries, 8 of 12, or 67%, included at least one juror who made some comment about the case during the course of the trial. Another way of looking at case discussion recognizes the fact that in some of these cases only a single comment was made about the case. Although other jurors may have been influenced by hearing the

53. In two Discuss cases there were no discussion periods available to analyze because no opportunities for discussion occurred. One case was a short summary trial in which no breaks occurred, and the other involved no breaks that were videotaped when there were at least two jurors in the jury room.

54. The single complex case in the No Discuss condition, not included in Discuss/No Discuss comparisons, had 92 periods with a total of 764 minutes available for discussion.

55. Although the unit of time is a ten-minute period, a partial period could occur if, for example, the jurors were called back into the courtroom in the middle of a ten-minute period. Partial periods were weighted according to the actual number of minutes out of ten that discussion was possible.

56. This figure eliminates the two Discuss cases in which the jurors had no opportunity to discuss the case.

single comment, the exposure in these instances was minimal. Treating "single mention" cases as constituting cases without discussion, the proportion of cases with discussion was the same for Discuss cases (25 of the 28 cases, or 89%), but dropped substantially for No Discuss cases (5 of the 12 cases, or 42%). In addition, multiple case discussions occurred during all seven of the complex Discuss cases (i.e., those that were not randomly assigned to the Discuss condition).

Although some mention of the case often occurred in the No Discuss juries, it tended to be much more limited than discussion of the case by the Discuss juries.⁵⁷ Jurors on the 28 Random Assignment Discuss juries with at least one break during the trial talked about the case in 7.82 out of 15.79 or 49.5% of those periods, whereas the 12 No Discuss juries had trial-related conversations in 2.25 periods out of 15.75, or 14.3% of the periods.⁵⁸ With one exception, when the No Discuss juries talked about the case, comments were brief and typically inquired about very specific issues (e.g., Did the expert consider certain variables, such as a person's height and weight in making calculations about the impact of an accident? Will a particular chart shown during the trial be available to them during deliberations?). In the exceptional No Discuss case, discussion occurred across five periods and tended to last longer and contain more substance. Jurors in this case discussed, for example, the plaintiff's motives for bringing the case and why he would be seeking monetary damages given the circumstances of his injury, and elaborations on specific issues that arose during testimony.

Jurors in this latter case frequently sought to stop discussion by noting their belief that the jury was not supposed to be discussing the case at that time. On some occasions this put an end to discussion; in other instances, it did not. Jurors in the remaining cases frequently appeared to ignore the brief comments when they arose. Others cited their knowledge of the rules, as in this instance:

Juror 9: The reason the [defendant] is there is because he's going to have to pay whatever damages there are.

Juror 8: At least [the defendant] didn't take off from the scene. He tried to get out of the car.

Juror 9: He admitted right away it was his fault. . . . The purpose of the case is to see if her injuries are the result of the accident and therefore he is liable for damages, or if they are a result of all her previous life.

Juror 5: We decided we weren't going to talk about it.

Juror 9: That's right, we're not talking about it.

In another instance, a juror responded with humor:

57. We did not count the 31 periods when the bailiff was present either throughout the entire ten-minute period or during the time that all jurors were present as time "available" for discussion. We also excluded from the count three periods in which the tape did not reveal how many jurors were present.

58. Discussion occurred with greater frequency in the more complex cases that were not in the Random Assignment group. In the seven complex Discuss cases, jurors discussed the case on average in 33.1 out of 58.4 or 56.7% of the periods.

Juror 8: I wonder if [the plaintiff] can still drive [given that she can't walk]. . . .

Juror 5: That's a question you can write down.

Juror 6: There are a lot of people in this town who can walk but who certainly cannot drive. Just look out the window!

[Laughter, conversation moves to different topic].

Two independent coders read all the pre-deliberation discussion period transcripts to identify instances in which jurors mentioned the rules governing discussions, such as the rule not to talk about the case in the No Discuss trials. Among the 13 No Discuss cases (including the one complex case), eight (62%) contained at least one mention of the admonition not to talk about the case. That is, in nearly all of the No Discuss cases in which discussion occurred, there was at least one reference to the admonition.⁵⁹ In all but two cases, the rule reminders occurred in a single ten-minute period; in one case, they occurred in four periods, and in the No Discuss case in which discussion occurred across five periods (mentioned above), we also found rule reminders in five periods.

E. Timing of Juror Discussions

We hypothesized that the willingness or desire to discuss the case would increase after the jurors heard more evidence, that is, as the evidence accumulated. Our reasoning was that they not only would have more evidence, but they would be accumulating evidence from both sides in the dispute. Further, discussion would be more likely as the jurors came to know one another better. We tested the hypothesis by comparing the rate of discussion in periods before the mid-point of the total set of discussion periods for the case against the rate of discussion after the mid-point. Jurors in the 35 Discuss cases⁶⁰ did talk about the case more often during the later periods of the trial. In the first part of the trial, discussions occurred in 43.2% of the periods and in the last part of the trial, discussions occurred in 53.1% of the periods. This difference is statistically significant.⁶¹ In short, the hypothesis was supported. Although this finding cannot stand alone, it bears indirectly on one of the arguments raised against Rule 39(f).

Increasing discussion as evidence accumulates does not seem consistent with closing of jurors' minds against later evidence. However, we present data bearing more directly on this point in Part VI.

59. Typically these rule-related comments in the No Discuss cases were aimed at policing jurors' behavior, i.e., to remind them not to talk about the case in the few instances in which they did so. However, our coding also included more general references to the rules—for example, "So I guess we can't talk about it, huh?"—which may not necessarily have been said in response to a rule violation.

60. The 35 Discuss cases include the 28 Random Assignment Discuss juries which had at least one break available for discussion (two cases had none) and the seven complex Discuss cases that were not randomly assigned.

61. A Chi Square test yielded a value of 8.42 which is significant at $p < .004$.

F. Compliance with Rule 39(f) in the Jury Room

Rule 39(f) requires jurors to have their discussions only when all of them are present in the jury room. The data indicate that the rule was not strictly observed. On average, among the 35 Discuss juries there were 15.51 periods when all the members were present at some time during that period. The jurors, on average, discussed the case at least some of the time when all of the jurors were present in 8.31, or 54.0% of those periods. In contrast, on average there were 16.1 periods in which not all of the jurors were present at some time during the period, and discussions took place when some jurors were missing, on average, in 4.49, or 27.9%, of those periods.⁶²

We undertook a closer examination of these Rule 39(f) violations. Some of the Discuss juries were scrupulous in adhering to the rules. Two of them even halted discussion when a member left the table to go to the bathroom inside the jury room chamber. In a couple of other trials, the jurors refrained from discussion at the beginning of the case, but expressed frustration with one or more smokers who took advantage of every break to have a cigarette; eventually they started discussions without the smokers. In other instances, the jurors' comments were relatively brief exchanges between one or more jurors, rather than an extended discussion of the case. In still other instances, the conversation about the case started between a number of members, often a majority, and continued as other jurors drifted into the room and began to listen or take an active part in the conversation. Closer inspection of the videotapes also revealed that the violations of Rule 39(f) tended to occur more often when jurors arrived to start the day or at lunch time recess, rather than during the mid-morning and afternoon recesses. In the mid-morning and afternoon recesses, the jurors had only a short time before being called back to court and were more likely to stay together in the jury room.

However, there were some juries that appeared to violate the rule more frequently. In one lengthy case there was no trial-relevant discussion in 30 of 67 periods or partial periods, and in three additional periods the discussion primarily involved speculation about the possibility of another witness or comments about the judge and lawyers. That left 34 periods in which trial discussion did take place and in only eight periods were all the jurors present during discussion. Thus, in 26 periods there was discussion without all of the jurors present. A closer examination of each period reveals that juror attendance in each of these periods varied. Sometimes the conversation began with five or six members present and a remark or two was made about the case but other jurors arrived in that ten minute period.

It is useful to provide some examples of discussion during periods when not all members are present. In the next example, a subset of jurors get clarification on some specific issues in the case, as well as discuss the admissibility of insurance:

[Four persons in jury room, small talk between jurors.]

Juror 10: I caught myself dozing off a couple of times yesterday when [name] was reviewing papers.

62. Note that a period could include both discussion when all jurors were present and discussion when not all jurors were present, so the sum of the number of periods when jurors were present and the number of periods when jurors were not all present exceeds the total number of periods.

Juror 2: I thought the bailiff was going to fall off the chair.

Juror 4: Yeah. He always does that.

Juror 2: I got here this morning to write down a bunch of notes, but I'm waiting for this guy [name] to get up there because I think he's the key.

Juror 6: What is his title?

Juror 2: He's the CEO.

[Juror 4 enters jury room].

[Jurors 2, 4, and 6 talk about who is in the audience in the courtroom].

Juror 2: [T]hat's the part I wish I knew something about. That's the kind of thing you just can't ask about. I dunno if we can ask if he has liability insurance.

Juror 4: I am sure once everything is cut and dried, we can ask. Because that's gotta pertain to our decision.

Juror 2: It should. It should be our responsibility.

Juror 4: Well, if we rule in favor of the defendant and all and she [plaintiff] has had some assistance, I don't think we oughta give her too much more assistance than where if she had none she would need more.

Juror 2: I don't know if that is real pertinent. It is, but is it really?

Juror 6: In their eyes.

Juror 2: The thing is, if we come to a settlement in all of this, it's our decision. So, we need to know this stuff.

[Jurors 8 and 3 enter the jury room].

There is no question that at one level the above example is a clear violation of Rule 39(f) in that the jurors were talking about an evidentiary issue among only a subset of the jury. Whether this type of exchange is inappropriate is another matter. Some readers may take the position that this exchange is impermissible and problematic, whereas others may view the conversation as innocuous because they might conclude that the conversation will not likely affect the jurors' knowledge or understanding of the cases.⁶³

63. As part of our research we posed several examples taken from actual Arizona jury discussions to a sample of 39 appellate judges. There frequently was no consensus from the judges on whether a stated conclusion by jurors during discussions was appropriate or inappropriate, given an instruction that jurors were not permitted to discuss the case. Consider the following statement by a juror: "Did you see how she walked up to the witness stand without limping?" Although 31 of 39 judges thought the statement would be appropriate if jurors were allowed to discuss the case and one judge believed it would be appropriate even if jurors were instructed not to discuss the trial, seven said it would never be appropriate. Among the judges saying it was appropriate, one said that "it simply calls attention to a fact that may be relevant in the determination of facts" and another said it was only a "comment on the credibility of a witness giving evidence." In contrast, a judge opposing the statement said the

A second example, in which a group discusses conflicting opinions of two experts, is not so ambiguous:

[Eight jurors are present, but one is the person who will ultimately become the alternate, and another juror is not in the room].

Juror 1: [explaining the expert engineer's testimony] If you're rear-ended, the first thing you do . . .

Jurors 5 and 7: (interrupt) You go backwards.

Juror 1: You go backwards, but then you get the recoil going forward. And that's when the seatbelt catches you and stops you. What [the experts are] having arguments on . . .

Juror 7: (interrupts) Is whether he went forward first?

Juror 1: Is, one . . . did [the plaintiff's car] go forward instantly? Did it accelerate? If it accelerated, you get the same thing . . . it's like you've been rear-ended: You're going to go back first and then go forward, recoil. If you all of a sudden decelerate, that means the car keeps going forward, I mean, the car also stops, but you're going to keep on going forward. And that's when you're going to hit. And the engineer was claiming that the time before they actually hit, when they crumpled each other and then when they started to turn, the time it took the crumple, the car was absorbing energy and . . .

Juror 5: (interrupts) That's when he went forward.

Juror 1: He had enough time to go forward, before the car started turning. That's why when I asked those questions, he said "No, no, he'll have time to go forward and [injure himself] before he starts going forward and backwards," which I don't know is truly the case.

Juror 5: But I think the question we were hearing from the other side is: if the hit was like this [hands are indicating diagonal impact at side of car], doesn't the [striking car] contribute some more energy to that sort of general forward movement in the car? Because it's not at right angles, and it's not head-on.

Juror 1: My general impression is that that's true. If you have something going at an angle [makes same diagonal diagram with his hands], you have some motion going perpendicular to the car and you have some motion going along the car. And when you get hit, you get shoved [hands indicate motion to the side] and you also get shoved

statement "indicates a juror has reached a judgment before all the evidence has come in." Fourteen judges were presented with this juror statement: "I think that the plaintiff could have had a neck problem before this car accident with the defendant, but the car accident may have made it worse." Eight judges said it would be appropriate under discuss conditions but six said it would never be appropriate. One judge considering it acceptable stated: "The comment discusses possibilities but reaches no conclusion and therefore is not prejudicial," whereas another judge considered it unacceptable on the grounds that it "goes to the ultimate conclusion of the jury."

forward. And, at least for a short while, before friction, your car would actually go forward for a little while as it got hit, and you would go back. And that's why I was asking him and I was, like, "That seems a little strange." And he's saying there's something actually happening in between, while it's crumpling. And he didn't make that particularly clear. Hopefully we can read his report (Juror 5 agrees). Because they keep referring to all the reports, and I say: Give me the dumb report and we'll read it.

[The missing juror returns after this discussion].

It is unlikely that this valuable discussion would have taken place during the trial if the jurors in this case had not been given permission to discuss the evidence. It is possible, however, that they would have shared the same information during deliberations. On the other hand, the failure to avoid discussing the case in the absence of one of the jurors meant that the missing juror did not have the benefit of the exchange at that time. In this case, only one juror was absent. However, there were other instances in which a smaller proportion of jurors was present, but the sub-group nevertheless discussed substantive issues, such as the parties' credibility, as in this case in which five jurors were present in the morning before trial started:

[The group is discussing the plaintiff's testimony on the stand the previous day].

Juror 7: I was telling [another juror] it seemed like after the defense brought in that picture [the plaintiff's] attorney had never seen, it was almost like [the plaintiff] gave up. He just went, his body motions and language, it was like he gave up right then. He knew he was a cooked goose.

Juror 3: Everyone else has pretty vivid memories except for [the plaintiff]. The [defense witness], we never got a chance to talk about her yesterday. I thought my Lord, you'd think [the accident] was yesterday.

Juror 7: I know. She didn't have to hesitate, she didn't have to think, it was just like that. And . . . it's not like she's gaining anything [by testifying].

A final example comes from one of the several longer and more complicated trials in which the jurors were provided exhibit notebooks that they were allowed to take back to the jury room. Early on in the trial the jurors were quite aware of the rule. Indeed, at one point a juror said, "So we're all in here. Can we talk?" and several other jurors affirmed that they could. However, as the trial progressed, some of the jurors carefully looked through the notebooks and made spontaneous comments to the others about relevant items when not everyone was present. The comments related the exhibits to trial testimony, but they did not relate to firm conclusions about the meaning of this evidence. Nevertheless, the presence of notebooks appeared to be the stimulus for these violations of Rule 39(f).

As with the No Discuss cases, we coded the Discuss condition cases for reminders about the rules governing discussion—in particular about the need for all jurors to be present. Of the 35 cases with opportunities for discussion, 28 (80%)

included at least one reference to the rules. These references emerged, on average, in 2.23 periods, indicating that some acknowledgment of the discussion rules often occurred more than once.⁶⁴ (Recall that discussion without all jurors present occurred, on average, in 4.49 periods.) Although some comments were general in nature (e.g., "Well, we're all here, so let's start"), more often the reference to the rule served to cease or prevent conversation (e.g., "You can't talk about it now after I leave," or, "I guess we shouldn't talk about it because not everybody is here").

G. Juror Reports About Discussions With Jurors and Non-Jurors

Whether under Rule 39(f) or under the traditional rule proscribing discussion among the jurors themselves, all jurors are admonished not to discuss the trial with non-jurors until the judge formally dismisses the jury. One hypothesis is that by allowing jurors to discuss the case among themselves they will not feel a need to discuss it with outsiders. An opposing hypothesis is that relaxing the rules on discussion will decrease inhibitions of jurors and actually increase the amount of discussion with non-jurors. The only realistic way these competing hypotheses can be tested is through juror self reports.

Recall that Hannaford et al.⁶⁵ found in their research on Rule 39(f) that 11% of Discuss jurors admitted to informal discussions with family and friends compared to 14% of No Discuss jurors, a marginal difference crediting Discuss conditions with greater compliance. Jurors in the present research were asked three questions on the post-trial jury questionnaire administered at the termination of their deliberations: (1) how often trial discussions occurred in the jury room; (2) how often trial discussions occurred outside the jury room; and (3) how often trial discussions with family and friends occurred. In each instance, the juror could respond never, one or two times, or three or more times. The second and third questions did not distinguish between talk during the trial and talk during deliberations. (Some of the juries had overnight recesses in the midst of their deliberations.) The following data are based on the 397 jurors who completed the juror questionnaire, out of the 401 jurors who took part in the videotaping research.⁶⁶

First, we examined jurors' self-reports about how often they discussed the case in the jury room. On average, jurors in the 28 Discuss cases with at least one break during the trial were substantially more likely to report discussing the case in the jury room than were the jurors in the 12 No Discuss cases (82% versus 31%).⁶⁷ Moreover, 56% of jurors who were told they were permitted to talk reported talking

64. The distribution was as follows: thirteen cases contained one period that had a rule reference; for four cases, references occurred in two periods; for three cases, in three periods; another four cases also had references in four periods. Finally, four cases had five, six, eight and thirteen periods, respectively, that contained rule references.

65. See *supra* Part II.

66. For all of the questionnaire data, responses were available for analyses of all 50 cases.

67. The difference is statistically significant: Chi-Square = 80.78, $p < .001$. Because questionnaires were completed after deliberation, we also re-ran all analyses to account for the non-independence of responses within juries (also called an intra-class correlation). This adjustment never changed the direction or statistical significance of any findings reported here. Results are on file with the Authors and are available upon request.

about the case three or more times, whereas only 20% of jurors instructed not to discuss the case said they discussed it so frequently. Although these responses are comparable to the behavioral data for the Discuss jurors reported in Section IV.D, the self-reported responses for the No Discuss jurors under-report actual juror discussion of the case in violation of the court's instruction.⁶⁸

Questions 2 and 3 assessed the degree to which Discuss and No Discuss jurors reported discussing the case outside the jury room. There is no evidence from the jurors' reports that the Rule 39(f) innovation reduced outside discussion. Overall, however, jurors rarely reported discussing the case outside the jury room or with family and friends. Those permitted to discuss the case in the jury room reported discussing it no less often outside the jury room than those instructed not to discuss the case at all during the trial (12% versus 7%), and no less often with family and friends (15% versus 10%).⁶⁹ These figures are generally consistent with those reported by Hannaford et al.⁷⁰

Nevertheless, the videotaped discussions revealed a few instances in which a juror mentioned to another juror that he or she had discussed the case with a non-juror. In one instance, the juror acknowledged that he had behaved improperly and in two other cases the offending juror was reprimanded by another juror.

H. Summary

Most juries allowed to discuss the case did so but they varied in the extent to which they took advantage of the opportunity. However, the data also showed that jurors often violated the admonition to discuss the case only when all of them were present in the jury room. There is no evidence that being allowed to discuss the evidence either inhibits or encourages juror discussions out of court, but, generally, out of court discussions were reported to be infrequent in our research as well the earlier research of Hannaford et al.

V. MID-TRIAL VOICES: THE SUBSTANCE AND PROCESS OF JUROR DISCUSSIONS

Now that we know how often jurors talk about the case, it is time to turn to the content of those discussions and the processes through which those discussions are carried out. What do the jurors talk about and when and how do they talk about it?

68. In the longer, more complex Discuss cases, nearly all jurors (97%) reported discussing the case in the jury room. All of these juries actually did engage in case discussion. *See supra* Part IV.D.

69. Four of the Discuss cases and two of the No Discuss cases did not involve an overnight recess between the beginning of opening statements and the end of deliberations. These cases were not included in the analysis of reported discussion with family and friends. Neither of the comparisons relating to reports of talking outside the jury room yielded statistically significant results. These data and tests are on file with the Authors and are available upon request.

70. They are also similar to the responses obtained for the seven complex Discuss cases: 16% of the jurors in those trials reported talking about the case outside the jury room, and 12% reported talking about the case to family or friends.

Two of the claimed benefits of allowing discussion are that the jurors can review the evidence as it occurs at trial when it is fresh in their minds and that other jurors can correct any misunderstandings about the evidence. Another is that discussion will allow jurors to formulate questions to be asked at trial. In this Part, we first provide an overview of how jurors interact and an outline of the substantive matters that they discuss. Then we turn to systematic content analyses of the timing of discussions and of the information exchange during discussions in order to examine the extent to which the claimed benefits of discussion are realized.

A. The Interactive Process: Reviewing, Interpreting, Evaluating, and Questioning

1. Group Dynamics

Discussions and deliberations in the jury room involve fluid and dynamic social interactions. A viewer of the videotapes of juror discussions is immediately struck with a sense of familiarity that, at least in hindsight, should surprise no one: jury discussions are, in effect, similar to committee meetings that occur in a wide range of non-trial venues. The jurors take their seats around a table, although sometimes individual jurors will push their chairs back, stand while discussing or listening, pace back and forth, or move to an easel at the front wall of the jury room. Jurors move in and out of the room in order to use adjacent bathrooms, to make phone calls, or to get coffee or snacks.

Consistent with legal assumptions, there is a strong overlay of equality displayed in juror interactions, regardless of the socio-economic status of the members. Discussions during trial tend to be less structured than discussions during deliberations because no foreperson has been chosen, although sometimes an informal leader will emerge who guides discussions. Such leadership is sometimes assumed by different persons at different times; oftentimes there is no leader during the discussion phase. Occasionally there are minor personality clashes, and occasionally sharp words, but overwhelmingly the jury room atmosphere in the sample of Arizona cases is marked by civility.

Involvement is fluid. Sometimes all of the jurors have their attention focused on a single topic, taking individual turns at listening and commenting. At other times, individual jurors express their thoughts without a response from other members. Some jurors say little or nothing during discussions, apparently content to listen. In addition, in a manner also familiar in other types of committee meetings, two or more jurors may temporarily engage in a side conversation on one topic while other members continue on to a different subject, eventually rejoining the main conversation. The discussion is frequently non-linear: a topic will be raised and then dropped in favor of different topic but returned to later, sometimes on multiple occasions. An appreciation of these group dynamics is essential if we want an accurate image of how the jurors come to understand the evidence.

2. *The Substance of Discussions*

What kinds of topics emerge during pre-deliberation discussion periods? Because each case involves a separate series of overlapping sets of facts, it is not possible to parse the discussions systematically into neat, mutually-exclusive categories, nor is it easy to represent the distribution of topics (e.g., are witnesses discussed more often than exhibits? What percentage of all conversation concerns attorneys?). Nevertheless, a review of the discussions suggests some broad categories that are commonly observed across many of the cases. These topics occur at different frequencies and time periods from jury to jury, and they seem to be contingent on when evidence is presented, the characteristics of that evidence, unique interests of individual jurors, and the particular dynamics of social interaction among the jurors. The categories show that the jurors actively review and evaluate what they have heard, make interpretations and inferences from the evidence, and speculate about what they have yet to hear (or will not hear), frequently using other jurors as resources for their questions and uncertainties. These categories and some examples are as follows:

- *Questions about the trial process and rules.* Jurors ask: "How is the alternate juror chosen?" "Will we get to see those medical charts when we begin deliberations?" "When will the judge instruct us on the applicable law?" "Why didn't the witness appear live instead of by deposition?"
- *Questions about the substance of the case.* Jurors inquire of other jurors: "Was the car going 40 miles per hour?" "What exactly are they saying the defendant's obligations were under the contract?" "Could the plaintiff have been injured so severely when the damage to the vehicles was so slight?" These questions also involve speculation or forecasting of what they can expect from the case, e.g., "How much money do you think the plaintiff's lawyer will ask for?"
- *Attempts to clarify the temporal sequence of events or facts from witnesses.* These include: "When did the plaintiff go to the doctor?" "When did the prior injuries occur?" "How many days before she/he returned to work?"
- *Questions asked, questions that need to be asked, and questions jurors tendered but were not asked by the judge.* These include comments and questions like the following: "That is the reason that I asked that question about when she moved in with her family." "Perhaps we should ask a question about her missing medical records." "I was going to ask that witness a question, but I'll do it later" (another juror responds that it is too late because the witness has been dismissed). "Did you see the way both lawyers looked at us (with surprise and concern) each time we submitted questions?" Jurors also discuss why the judge is not answering their questions.
- *Discussion of missing evidence, testimony, and instructions.* "Why haven't they told us how fast he was traveling?" "Was the defendant charged for reckless driving?" "Why has no one testified about the defendant's speed?" "Why didn't the plaintiff/defendant call [a particular witness]?"

- *Discussion about discrepancies in testimony and credibility of witnesses.* Jurors discuss perceived discrepancies between plaintiff and defendant regarding, for example, the speed at the time of impact or both parties' behavior in a tort or contract dispute. They consider discrepancies between the defendant's testimony and that of the police officer, and between what the plaintiff said about her pain versus what the lawyer or doctor said. Jurors also consider what an expert testified to in relation to other evidence or an opposing expert. The jurors' perspectives on experts, as revealed in their discussions, are not consistent with the common claim that jurors defer to experts without critically evaluating the content of the testimony.⁷¹ In one case, for example, a juror commented that the expert was independent and had nothing to gain, but another retorted: "Nothing but \$750 for testifying." In another case the jurors discussed the possibility that the lawyer and the chiropractors were "buddies" (i.e. in collaboration). Jurors also comment when an expert does not appear prepared.
- *Discussion of Insurance.* The subject of insurance and its role in both settlement and in trying to understand damages is a frequent topic of conversation, as the jurors attempt to understand why the dispute has come to trial.⁷² Jurors speculate as to why the plaintiff's or defendant's insurance did not pay for the injuries. They discuss why the insurer or insurers did not settle. They ask whether the case has to do with workman's compensation.
- *Instructions.* In addition to judicial instructions about Rule 39(f), jurors discuss other instructions given by the judge such as not considering anything that is not put in evidence at the trial. They also sometimes are concerned about the applicable law and when the judge will provide them with instructions about it.
- *Attitude and behavior of witnesses, lawyers, and the judge.* Jurors discuss the parties' demeanor on and off the witness stand. They speculate about what a lawyer is trying to do in direct or cross examination. Frequently, they complain about the repetitiveness and boredom of the examination process, including what the lawyer was attempting to accomplish in the examination. They express likes and dislikes of lawyer behavior, including personal habits or mannerisms (e.g., their style of questioning witnesses). Judicial behavior is not immune from discussion. Jurors not infrequently comment that the judge looks as bored as they are during tedious examination of a witness or that the judge occasionally appears to fall asleep.
- *Jury duty.* Jurors discuss the burdens of jury duty: the difficulty of finding a parking space, or the impact on their family or on their job. They inquire of others regarding when they get paid for jury duty and how much.

71. Other research bearing on the claims about how juries respond to experts is reviewed in Neil Vidmar & Shari S. Diamond, *Juries and Expert Evidence*, 64 BROOK. L. REV. 1123 (2001).

72. The role of insurance and attorney's fees in discussions and deliberations using data from this project is explored in Shari S. Diamond & Neil Vidmar, *Jury Room Ruminations on Forbidden Topics*, 87 VA. L. REV. 101 (2001).

- *Discussion about non-trial topics.* Jurors discuss their backgrounds and personal lives or tell stories. These activities fill time and they also help to establish relationships with their fellow jurors.
- *Filming in the jury study.* The jurors, as reported in Part III, do take notice of the cameras in the jury room or discuss the filming study, but these remarks constitute only a very small fraction of juror conversation during the discussion periods.

B. When Do Discussions Occur?

Before turning to a more detailed analysis of the substance of discussions, we look at when exchanges between jurors occur. One expectation about the Discuss innovation was that it would give jurors an opportunity to exchange thoughts and impressions while the witnesses' testimony was fresh in their minds. As we noted in Part IV, discussion opportunities are scattered throughout the trial; longer trials provide more breaks and, as a result, more opportunities for discussion. The number of breaks in the 37 Discuss trials ranged from 0 to 28, with an average of 7.83 breaks following witness testimony in the 35 cases in which at least one break occurred and the jurors had some opportunity to discuss the case.

To evaluate how and when the jurors used their discussion opportunities to review the testimony, we tallied the number of different witnesses the jurors discussed in each interval. On average, the jurors at each break referred in their discussion to 44% of the witnesses who had already testified. By the time the Discuss juries received their instructions on the law and began to deliberate, they had mentioned an average of 70% of the witnesses. In all but three trials, jurors had mentioned at least one of the parties. In addition, expert witnesses appeared in 25 cases that also had a break after the expert but before the end of the trial.⁷³ Jurors mentioned at least one expert in 80% of these 25 cases.

During the trial, the jurors generally had several opportunities to discuss each witness after the witness testified. The pattern of that discussion provides some indication of how the timing of the breaks can affect juror discussions. If the recency of the witness's appearance on the witness stand influences whether the jurors discuss the witness at the next break, discussions should be more likely to refer to a witness if he or she appeared immediately preceding the break (or, if the witness testified just before the trial ended on the previous day, in the morning before trial). Across all of the 35 Discuss cases in which breaks occurred, witnesses who testified immediately preceding a break were mentioned, on average, 54% of the time during the immediately-following break. In contrast, witnesses who did not appear immediately before a break were mentioned, on average, in 37% of the breaks following their testimony.⁷⁴

Of course, attorneys do not schedule their witnesses at random and may explicitly arrange the order of testimony to leave the jurors with particularly important

73. In two Discuss cases with experts, the only expert was the last witness and no breaks occurred between the expert's testimony and the beginning of deliberations, so there was no opportunity for the jurors to discuss the expert before the end of trial.

74. This is a statistically significant difference: $t_{\text{paired}(33)} = 3.44$, $p < .002$.

testimony fresh in their minds at the end of the day or when they are excused for a break. To control for this effect, we also evaluated whether jurors were more likely to discuss a witness when he or she had just testified than during other breaks following those witnesses' testimony. That is, we compared the 54% figure for discussion immediately following a witness' testimony with the frequency with which these same witnesses were mentioned during breaks when they were not the last appearing witness. While witnesses who testified immediately preceding a break were mentioned, on average, 54% of the time, these same witnesses were mentioned only 43% of the time during other breaks.⁷⁵

These data indicate that juror discussion tends to emphasize the most recent witnesses' testimony. There are exceptions, however. For example, the immediately preceding witness may not have been an important witness in the jurors' minds and they instead discuss more central witnesses. Sometimes the testimony of the immediately preceding witness may stimulate the jurors to reflect on a prior witness without specifically mentioning the witness whose testimony generated their thoughts. This is a reminder that the process of jury decision-making is a dynamic one in which jurors are drawing upon multiple sources in their attempt to make sense out of trial evidence.

C. Examples of Juror Discussions

The dynamic and interactive process among the jurors is illustrated in examples of discussion exchanges below. In the first exchange, from a motor vehicle case, the jurors use each other as sources to fill in their own recollection, but this moves into a commentary about notable aspects of the plaintiff and his physician, drawing upon their own experiences and information from other witnesses.

Example 1 [Discussing medical testimony]:

Juror 2: When did the independent medical exam occur?

Juror 7: July, 1998.

Juror 2: Right.

[All jurors talking at once].

Juror 3: And [plaintiff] had all of those prior injuries he didn't disclose.

Juror 2: I thought that was weird. It wasn't like they had to go to different doctors. It was all in one file.

Juror 5: It's not unusual for doctors to disagree.

Juror 7: His [treating doctor's] ability to treat patients seems to just prescribe more drugs.

Juror 2: It is just my opinion but [the plaintiff's] doctor wasn't very good, and at least this witness today knew . . .

Juror 6: I would like to see [the exhibit about his medication] again. I just want to see what happened after the accident.

75. This difference is also significant: $t_{\text{paired}(34)} = 2.33, p < .03$.

The last comment from Juror 6 reveals the updating the jurors sometimes undertake: they encounter a piece of evidence during the trial, they consider it further as the trial (and their discussions) move along, and then they want to revisit the material again in light of what has transpired. Likewise, jurors draw on their experiences and the evidence they have received in anticipating further information to come. As reported earlier, the jurors are aware from the judge's instructions and the opening statements that there are two sides to the dispute. The fact that the presentation of evidence is not in temporal sequence can lead them to ponder about what might come next, as in this second example, also from a motor vehicle trial.

Example 2 [Discussing sequence of accident]:

Juror 1: He [plaintiff] said he sped up when he saw the yellow light and then it was red. I didn't get that straight—was it a yellow or a red light [the plaintiff] saw [the defendant] going through?

Juror 7: It was red and he had to go because he was stuck in the middle.

Juror 1: But another time he [plaintiff] said he saw the other person see the light changing so he [defendant] sped up, or maybe that is what the [other witness] told him. There was no left turn arrow.

Juror 7: 'Cause if you see someone speeding up, what do you do? I sit there.

Juror 1: Yeah.

Juror 6: That's why we have to wait for the judge to talk . . . what are the laws in this state?

Juror 1: Yeah, you are not supposed to be in the intersection . . .

Juror 6: Well, there was no turn signal, right? No arrow? What was he doing in the intersection?

Juror 7: We need witnesses to tell us if he ran the light.

A final example from a different type of tort case indicates how impressions of evidence are raised and tested on other jurors, again with an anticipation of how these impressions may change with additional evidence and instructions.

Example 3 [Discussing plaintiff's pre-accident medical condition]:

Juror 4: The witness started to say something about her insurance and then dropped it. So there are a lot of things we may never find out about.

Juror 5: That was a lot of force [that struck plaintiff].

Juror 8: Oh yeah, that's what I was thinking.

Juror 4: And you know how hard her work is. I have no doubt this woman has pain.

Juror 8: That whole issue of degenerative disc disease. She probably has it but it should not factor in . . . and if she was in the type of pain she was in yesterday . . . [referring to a "day in the life of plaintiff" videotape.]

Juror 2: Yes, if that was really her level, geez . . .

Juror 8: I have a friend who is going in for back surgery and his pain varies from day to day. I mean it will be interesting to watch the whole videotape. Are we going to watch the whole thing?

Juror 3: A lot of people go to work with fused backs.

Juror 1: Doesn't this degenerative back disease really hurt her chances? I mean they have not really proved to me that this was one instance that caused her back problem.

Juror 8: Well, I think that at the end the judge will instruct us on what to consider and what not to, we haven't seen the whole thing yet.

Juror 1: I thought the doctor's testimony was most useful. I mean, [another witness] could never have seen what actually happened.

D. Frequency of Clarification and Correction

The above examples provide a qualitative illustration of the process of seeking clarification and exchanging information and opinions—precisely what Rule 39(f) was intended to foster. Are these examples atypical? Once again, given the variety of cases we have in our sample, it is difficult to provide a quantitative assessment of how frequently various types of exchanges occur across juries. As a solution to this complexity, we developed a list of general categories which represent the types of dynamics that would be expected under Rule 39(f) and which would also be likely to occur across disparate fact patterns and different sets of jurors. We developed a systematic coding scheme to assess these general categories for each case in the sample. It was applied to each ten-minute period that jurors discussed the case, regardless of whether they were all present or not all present.⁷⁶

Seeking information or clarification. First, we examined jurors' use of others to fill in gaps in their own knowledge, measuring the extent to which the opportunity to discuss the evidence results in the jurors seeking clarification of evidence from one another. We marked all instances in which jurors asked questions of one another or sought to clarify something about the substantive evidence or other information (e.g., judicial admonitions or lawyer statements) that emerged at trial.

Differences in view. In contrast to instances in which jurors seek out information, we examined how often jurors corrected each other's recall of what occurred at trial. This provides some measure of the extent to which discussion produces differences in recall. For this, we documented instances in which jurors disagreed about any element of the substantive evidence presented or other information presented at trial.

Missing evidence about substantive information. We noted the frequency with which a juror or jurors commented on or asked about substantive evidence or facts seemingly missing from the trial evidence, including anticipation of testimony they expect to hear later in the trial. Some examples are: "We need witnesses to tell us if she ran the red light," and "I wonder if we will get to see the X-rays."

76. A coding unit consisted of a single juror's comment in one of the categories, or an exchange among several jurors that fell in a single category.

Discussion of questions that were submitted to the judge. This includes discussion of questions asked of witnesses, as well as questions submitted that the judge did not answer or did not permit the witness to answer.

Discussion to plan questions. This includes both actual collaboration on questions to be asked and seeking tacit approval or opinions from other jurors regarding proposed questions.

Procedural issues. When jurors refer to, speculate about, or anticipate procedural elements of the trial. For example, "Will we all have to agree on the verdict?" "Who picks the foreperson?" and "How is the alternate chosen?"

The results of coding for the 35 Discuss cases are summarized in Table 5.1:

Table 5.1

Activity Per Period (Discuss Cases) Weighted by Number of Periods Available for Discussion

	Type of Activity					
	Seek Information	Differences in View	Missing Evidence	Question Discussion	Question Planning	Procedural Issues
Mean	1.90	.57	.42	.28	.27	.57
Median	1.50	.48	.27	.15	.09	.31
Range	0 - 7.33	0 - 2.67	0 - 2.14	0 - 1.67	0 - 1.57	0 - 2.00
SD*	1.88	.61	.48	.40	.38	.55

*Standard deviation, which measures the variability of mean values across the 35 cases.

The data show that under the discussion innovation, jurors make routine use of others to fill in information or misunderstandings. Jurors who discussed the case engaged in an average of 1.90 instances of seeking information or views from other jurors in each ten-minute period. In other words, with 20 minutes of discussion available, jurors asked nearly four questions of one another about substantive issues in the case. Compared to the other general issues we coded, this seeking information category was the most frequent.

Jurors also engaged in exchanging differences in view about some aspect of the evidence at an average rate of one-half per period of discussion opportunity (.57), and a rate of 0.42 comments about missing evidence per period. Thus, one difference in view or one comment or exchange about missing evidence occurred, approximately, once every 20 minutes of discussion opportunity. Table 5.1 also shows that the average frequency that the jurors discussed questions that were submitted, even if they were not subsequently addressed by the court, was 0.28 times per ten-minute period. They discussed questions that they were considering submitting 0.27

times per ten-minute period. Jurors also discussed procedural issues related to the trial, an average of .57 times per period.

These data add an important quantitative dimension to the examples provided in Part V.C. When jurors discuss the evidence, they do engage in the kinds of activities anticipated by proponents of Rule 39(f). However, two further questions need to be asked, namely, how the exchanges were used to understand the evidence and the extent to which the exchanges improved the jurors' accuracy regarding recall of evidence.

E. Fact and Inference Exchanges

Closer examination of the examples in Part V.C and the systematic data in Part V.D quickly shows that these exchanges involved, for our present purposes, two main types of exchanges about the substantive elements of the trial. First, there were exchanges involving factual testimony at trial which can be labeled "fact exchanges." The first two examples in Part V.C involved such exchanges (i.e., "When did the independent medical exam occur?" "I didn't get that straight—was it yellow or a red light . . .?"). Jurors' attempts to clarify or recall the evidence they have heard or may have missed is unsurprising. After all, most of the evidence is presented to the jury in oral form, and even careful note-taking does not prevent potentially crucial facts from being missed or misinterpreted.

The second type of exchange involved opinions, inferences, or interpretations of trial evidence. In these exchanges, the basic evidence was not contested. Instead, the jurors were questioning only the meaning of that evidence, and hence we labeled these "inference exchanges." The third example in Part V.C demonstrated this type of exchange (e.g., "Doesn't this degenerative back disease really hurt her chances?"). Consider some additional examples,⁷⁷ the first involving a seeking of information regarding interpretation, the second and third providing examples of differences in view over interpretation:

Example 1:

Juror 5: I don't know if anyone else thinks the same but they said the bruises and abrasions were below the knee. Right? And it's usually instinctive if in the fall you catch yourself like this [juror puts hands in front to illustrate]. Am I right? Then how could it have happened the way [plaintiff] claimed?

Example 2:

Juror 6: Let me ask a question. If the [other] car swerved to the right, then how could the damage have been only to the left bumper?

Juror 2: Yeah, right.

Juror 6: It seems to me that he could not have stayed in his own lane as he claims he did.

77. Parts IV.D and IV.F, *supra*, provide still other examples of jurors developing inferences from the evidence.

Juror 4: Well, he could have been in his own lane but turned the [steering] wheel at the last second to avoid the crash.

Example 3:

Juror 1: [M]aybe she is telling the truth and just didn't write it down . . . if she had written everything down, they wouldn't have a case.

Juror 6: But you have to think in her eyes and mind, and what she's thinking at the time.

Juror 1: I agree, but she didn't document it.

Juror 3: A lot of time in medical stuff you think things but you don't write it down.

Juror 8: But you know, if it's not written down, it was never done, it was never thought, nothing, everything has to be documented, that's the biggest part.

Juror 7: You think something and you don't necessarily write it down. You don't write down what you think, you write down what you see.

Juror 8: I'm just saying that documentation counts, as [opposing expert witness] said. She [defendant] speculates a lot but doesn't have anything documented.

As noted in Part V.C, inference exchanges involve the jurors bringing their personal knowledge of the world and their common sense and judgment to bear on the evidence. This kind of reasoning helps the jurors put testimony into perspective and context and is an essential task if jurors are to make sense of the testimony, which would otherwise be a mere jumble of facts and assertions.

The proportions of inference and fact exchanges varied from jury to jury. In some juries the percentages of each type were approximately 50%, but in others the proportions differed. In one case, for example, 61% of the seeking information (SI) and differences in view (DV) exchanges involved inferences, whereas in another case they constituted 37%. This leads to the question of whether discussions assist in helping the jurors in obtaining an accurate representation of the evidence.

F. Does Discussion Improve Accuracy of Evidence Recall?

To remind the reader again, one of the claimed benefits of Rule 39(f) is that in longer and more complex cases, discussion will allow the jurors to ask other jurors about points of confusion and to test their recall and impressions against one another. As we discussed some of our preliminary findings with judges and social scientists, this was a primary question: does discussion help the jurors to "get the evidence straight"?

In an attempt to address this issue, we undertook detailed analyses of five of the seven trials that were well above the median of other trials in terms of length and that had relatively difficult, contradictory, or potentially confusing testimony from lay and expert witnesses. For each case, first we scrutinized the SI and DV codes to identify those exchanges that were fact-based. The fact-based exchanges were placed

in context by examining the discussion that preceded and followed them. Then, the outcome of the exchange—that is, the resolution accepted or the responses received from the jurors—was compared to the trial record to ascertain if the jurors “got it right.”⁷⁸ These case studies are presented below.

Case Study 1: This case had 85 ten-minute discussion periods, and jurors discussed the trial in 51 of them. There were 128 seeking-information (SI) attempts, of which 71 (55%) involved queries about what occurred at trial (fact exchanges). There were also 35 differences in view (DVs) expressed and 24 of them (69%) involved fact evidence. Thus, there were 95 outcomes (71 SIs and 24 DVs) to test against the trial record. This trial, like some other complex and longer trials, involved the jurors being supplied with exhibits and depositions in a juror notebook containing selected portions of evidence during the trial. The jurors were allowed to carry the notebooks back to the jury room during breaks. Jurors in this case also appeared to have taken extensive notes. In the following excerpt they are discussing witness testimony.

Juror 5: [reading from deposition] Yeah. Look on page 32, line 48. Maybe I’m reading it wrong.

Juror 2: [also looking at deposition] Yeah, you’re right. It says, “I wasn’t looking. . . .”

Juror 9: Yeah! Yeah. That’s really strange. That’s good you caught that—that was good.

Juror 7: I don’t understand.

Juror 5: So [Witness Y] said that he wasn’t watching but he heard [Witness X] talking, but yesterday [Witness X] said that she didn’t arrive on the scene until later.

In a later break in this same trial the jurors are discussing a number of expert witnesses who testified in succession, some for the plaintiff and some for the defense. Four of the jurors are consulting and comparing their notes.

Juror 1: By the way, when he [the judge] says not to pay attention to his testimony, what did he say?

Juror 6: I don’t know . . .

Juror 3: Only about that part about the cause of the knee fracture.

Juror 9: I looked over my notes and I don’t have it.

Juror 8: About what he [the judge] wants us to disregard?

Juror 3: Right.

Juror 8: Yeah, it was about the cause of the fracture.

78. In a few instances it was not possible to ascertain the accuracy of the exchange because either the jurors’ comments were indecisive or the information could not be obtained because it was evidence not captured by the video camera or transcript. In some instances a juror posed a question but for various reasons it evoked no reply from another juror. We note these instances in our discussion. Finally, note that some exchanges involved both fact and inferences to be drawn from the facts. Mixed exchanges were coded as fact exchanges.

Juror 1: Is he [expert witness] the one with dark hair?

Juror 7: No. He was the skinny silver-haired guy.

[Several jurors talk at once indicating agreement, with Juror 7.]

Juror 1: And who called him, the plaintiff or the defense?

Several jurors answer: The defense.

Juror 2: He was the defense's first witness.

Juror 8: They want us to disregard that part of his testimony because he couldn't back it up.

Of the 95 fact-based exchanges, there were two instances when the other jurors did not respond to the juror's query, and four that resulted in somewhat ambiguous answers or the correct answer could not be determined from the trial record. However, in the remaining instances (89 of 95, or 94%), the other jurors' responses resulted in a correct portrayal of the evidence as reflected in our transcript of the trial. Of note, not all of these exchanges involved facts that were critical to the main issues of the trial. For instance, there was one exchange about the ages of the parties which involved a minor correction but had no essential importance. On the other hand, as reflected in the examples given above, some resulted in important corrections of one or more jurors' lack of knowledge or mis-impression.

Case Study 2: This case involved various forms of expert testimony as well as conflicting evidence from a number of lay witnesses. Discussion of the trial took place in 43 of 67 ten-minute periods. Twenty-four of 42 (57%) SIs and 20 of 48 (42%) DVs involved facts. In one instance the reply was wrong and not further corrected, but it was an inconsequential error that did not pertain to the central elements in the case. There were also five instances in which the answer could not be clearly determined as right or wrong. However, in the remainder of exchanges (38 of 44, or 86%), the discussion provided correct information. An illustrative excerpt is as follows:

Juror 3: Well, the only problem he had before [the accident] was . . .

Juror 2: [interrupting] back and knee problems.

Juror 3: No, he didn't have the knee problem at the time.

Juror 7: 1995.

Juror 2: No, in '95 he had a back problem.

Juror 3: Yeah, and the knee problem occurred in '97.

Juror 9: But it was in the '95 record, though, that he also had a knee problem. [Correct answer].

Case Study 3: This case, a tort claim arising from a serious injury and involving various types of expert evidence, had 33 periods, and discussion occurred in 15 of them. Eighteen of 50 SIs and seven of nine DVs (or 25 total) involved fact evidence. The exchanges resulted in correct answers in 14 instances (56%) and additional two in which the evidence was essentially, but not completely, correct. We

could not determine correctness in nine instances, but there were no instances involving incorrect answers.

Case Study 4: The fourth case was a non-motor vehicle case that had some expert evidence. However, the primary complexity related to conflicting testimony of lay witnesses and to applying the law to the facts. Of the 80 periods, discussion of the trial occurred in 44 of them. There were 84 SIs in the discussions and 30 (36%) involved fact issues. Of 40 DVs, 20 (50%) involved facts. Thus, there was a total of 50 fact-based exchanges. Two information-seeking questions occurred just as the bailiff returned to take the jurors to court, and a third was ignored by jurors who were focusing on another issue. All of the remaining fact-based SIs and DVs (94%) resulted in a correct portrayal of the trial evidence.

Case Study 5: This trial involved contradictory expert testimony, a very significant part of which was medical testimony, as well as lay witnesses. Discussion occurred in 30 of 77 periods. Of a total of 44 SI exchanges, 21 (47%) involved queries about facts. There were 37 DVs and nine (24%) involved fact exchanges. In all but two indeterminate instances, the exchanges resulted in a correct version of the evidence.

An illustrative example from this case shows a combination of fact and inference exchanges as the jurors attempt to understand and interpret the meaning of the evidence.

Juror 8: I'm saying the letter wasn't signed until the 12th. How could they notify him or fax him until after they knew it?

Juror 2: What would they have said to him on the phone? I would think . . .

Juror 6: [interrupting] They said working days, so I'm wondering if it was a Tuesday or a Wednesday.

Juror 3: Well, I remember when [Witness X] was testifying, they asked her if she remembered what day it was, and she said it was a Thursday, so that means there must have been a weekend in there, too.

Juror 3: Well, that must be why the letter didn't get signed. That seems so confusing.

Juror 6: [referring to her notes] It was during the week, so there were five days . . .

Juror 8: Well the other calls were on a Friday, so that is more than five days they had to read it.

Juror 1: But they didn't use the mail; they faxed it.

Several jurors: The letter was faxed but the contract was returned on Monday.

Juror 5: They faxed the letter but the contract was returned on Monday. That was a reasonable amount of time.

Juror 9: The critical time is how long after the letter was received. That's the critical information.

These intensive case studies provide an answer to the question of whether Rule 39(f) helps the jury to get the facts right. The answer is that, overwhelmingly, when jurors seek information or have differences of view about facts at trial, the exchange that follows while the trial is in progress results in an accurate picture of the evidence.

However, our classification also reveals that a high percentage of these juror exchanges involved attempts to draw inferences from trial evidence rather than to resolve factual issues. If we examine all SIs and DVs involved in these five case studies, we find that fully 64% of them involved inferences from uncontested facts. The last example from *Case Study 5* also illustrates that the search for correct facts was often intertwined with the inferences to be made from those facts.

G. Summary

With hindsight, there are no surprises in our findings that jurors talk about a range of topics, that trial evidence immediately preceding a trial recess is likely to be the topic of conversation and that the process of discussion is a fluid and dynamic one, combining questioning, clarification, and the drawing of inferences. Nevertheless, the data document some important matters related to Rule 39(f). The first is the frequent incidence of one or more jurors seeking opinions from other jurors, expressing differences in view, commenting on missing evidence and discussing jurors' questions. In other words, jurors make use of discussion periods available—not only in terms of the frequency of case-relevant discussion,⁷⁹ but also in terms of substantive exchange. The second is that discussion about what was actually said at trial does assist the jurors in reconstructing the evidence, as reflected in our five intensive case studies of relatively complex trials. The third conclusion is that juror discussions rather naturally involve making inferences from the evidence as the jurors try to understand what the legal dispute is about. Getting the facts straight cannot be separated from a concomitant attempt on the part of the jurors to impart meaning to those facts. As they rehearse the evidence they have just seen or heard, the jurors make inferences about credibility of witnesses, the sequence of events, the motivations of actors in the dispute, and more generally, about how the pieces fit together.

These findings are consistent with a substantial body of research on individual juror decision-making processes.⁸⁰ That research indicates that jurors are not passive recipients of trial evidence who store evidence in their heads until the end of the trial and begin the process of integration of that information only when it is

79. See *supra* Part IV.

80. See, e.g., W. LANCE BENNETT & MARTHA S. FELDMAN, RECONSTRUCTING REALITY IN THE COURTROOM (1981); Diamond & Casper, *supra* note 15; Shari S. Diamond et al., *Juror Judgments About Liability and Damages: Sources of Variability and Ways to Increase Consistency*, 48 DEPAUL L. REV. 301 (1998); Nancy Pennington & Reid Hastie, *A Cognitive Theory of Juror Decision Making: The Story Model*, 13 CARDOZO L. REV. 519 (1991); Nancy Pennington & Reid Hastie, *Explaining the Evidence: Tests of the Story Model for Juror Decision Making*, 62 J. PERSONALITY & SOC. PSYCHOL. 189 (1992); Vicki L. Smith & Christina Studebaker, *What Do You Expect?: The Influence of People's Prior Knowledge on Crime Categories on Fact-Finding*, 20 LAW & HUM. BEHAV. 517 (1996).

time to render a verdict. Rather, jurors are continually active integrators of information, weighing evidence as it is presented and attempting to determine how it fits into alternative “stories” about the disputed facts. Importantly, this existing body of research demonstrates that these processes occur among jurors who are under instructions that proscribe them from discussions with other jurors until the end of trial. Obviously, as our window on juror discussions during trial indicates, these processes also occur under conditions allowing them to discuss the evidence with one another. Thus, the findings that juror discussions during trial involve attempts to weigh evidence as it emerges, as well as get the facts straight, should be no surprise.

The data presented in this section are quite consistent with the goal of Rule 39(f) to facilitate understanding and enable jurors to correct impressions of the evidence when it is presented. However, the analyses have not yet addressed the crucial question of whether juror discussions foster premature judgments, and negatively influence deliberations. This issue is the subject of the next two Parts of this Article.

VI. DOES DISCUSSING THE CASE FOSTER EARLY VERDICT PREFERENCES?

Part IV discussed violations of Rule 39(f) in terms of jurors’ discussing the case at inappropriate times, i.e., when less than the full complement of jurors was present in the jury room during breaks in the trial in the Discuss condition. In this Part, we examine the extent to which jurors follow another directive of Rule 39(f) to “reserve judgment about the outcome of the case until deliberations commence.”⁸¹ We begin by examining what jurors say about verdict preferences in the course of their discussions before they have heard all the evidence and received final instructions on the law.

There is an obvious ambiguity in using a juror’s expression of a verdict preference during pre-deliberation discussions to indicate an instance of a juror’s premature commitment to a verdict. The juror expressing a verdict preference may be publicly committing to a position that will, as a result, become more difficult to dislodge with later evidence—precisely the potential negative effect of Rule 39(f) that has made the innovation most controversial. Alternatively, however, a juror who expresses a verdict preference may be merely offering a tentative position that is open to change in light of later conflicting evidence or in response to legal instructions. Similarly, the implication and effect of an expression of a premature verdict preference are difficult to assess. If other jurors recognize the expression as tentative, it may have little influence on the group. However, if the other jurors perceive the expressed verdict preference as a final position, whether or not it actually is one, the other jurors may be encouraged to accept that verdict as appropriate. Still other responses and effects might follow: the expression of a verdict preference may lead other jurors to raise objections to the expressed position, which could actually prevent premature closure by some jurors who would not otherwise have their early positions challenged if they did not voice them during discussions. Alternatively, it might have no effect.

81. ARIZ. R. CIV. P. 39(f).

With these complexities in mind, this Part looks at the specific question of how often jurors make statements about what a verdict should be, or will be, during pre-deliberation discussions, the types of opinions that are expressed, the point in the trial at which such statements emerge, and how other jurors respond to them.

A. Measurement and Analysis of Early Verdict Preferences

As trials unfold, jurors may develop a variety of opinions about the case. They may begin leaning one way or another, or some may even close their minds entirely to hearing any new evidence or alternative interpretations of the evidence. These responses can occur regardless of whether or not jurors are discussing the evidence during the course of the trial. Moreover, there is no way to determine the true opinion a juror holds in his or her mind about a case at any given point in time. Instead, what can be *measured* in this research, in which jury discussions were monitored, is what jurors *say* about the case and whether these statements reflect positions on elements of final verdicts (i.e., liability, comparative fault, damages). Thus, this Part describes and discusses “verdict statements” which occur during pre-deliberation discussion periods. In Part VII, we attempt to link pre-deliberation statements on liability to final verdicts on liability; however, as we will note, it is not possible to know whether the expression of particular verdict preferences made possible by the invitation to discuss the case *causes* jurors to make up their minds before deliberation begins, or merely reflects a position that the juror would have taken in the absence of an opportunity to discuss the case. It could be, for instance, that some cases are so one-sided in evidence that jurors would form early judgments whether or not they discussed the evidence. In addition, we cannot say that a different jury discussing the case but not expressing any early verdict statements would have arrived at a different verdict.

To track the number of statements that express what a final verdict will be or should be in both the Discuss and No Discuss juries in our sample, we developed a detailed set of criteria for defining and coding instances of verdict statements. We defined a “verdict statement” as an expression about an ultimate issue on the verdict form, such as: whether one party (or both) was negligent, whether the defendant was liable for the injuries, whether the juror was refusing to consider all or some of the claimed injuries, and/or whether the juror expressed a preference about damage amounts. In every instance, we required statements about ultimate issues to be explicit; that is, we did not code statements that strongly suggested a verdict unless the juror actually commented upon the ultimate issue. Thus, in an auto accident case, we would not consider it a verdict statement if the juror merely noted that the defendant “seemed to be driving fast” unless the juror also added that, therefore, the defendant was at fault. We did not code statements in which jurors repeated issues that had been conceded by the parties (e.g., the defendant conceded negligence but not fault).⁸²

82. For example, some defendants conceded that they had been negligent (e.g., they struck the rear of the plaintiff’s car); however they did not admit that they were at fault for the injuries claimed by the plaintiff (e.g., an injured back requiring multiple months of chiropractic care)—that is, they were disputing that the negligence was the cause of the injuries. In such instances, jurors who made comments such as, “Well, he was in the wrong because he hit the

With respect to damages, to be considered a "verdict statement" a comment on damages had to provide specific information about a preferred amount, either by stating a positive opinion about a particular figure (e.g., "\$6,000 seems reasonable to me"), ruling out an amount ("I'll never award \$15,000"), or limiting potential damages to a specific range of acceptable values ("Well, we know she's going to get at least \$10,000, but she's not getting the whole \$58,000"). A statement such as, "I just don't see giving the plaintiff a whole lot of money," was not sufficiently specific to be coded as a verdict statement about damages because "a whole lot" does not make reference to any particular amount. On the other hand, specific rejection of an amount mentioned in the course of the trial by pronouncing it "obscene" or "ridiculous" was coded as a verdict statement on damages because the juror was saying, in essence, that he or she would not award a specific amount requested. If jurors stated that the plaintiff should get "zero" in damages, this was considered a verdict statement on liability.

We coded separately statements that were "technical" violations of the admonition against engaging in discussions about verdicts. These included questions from jurors that attempted to elicit verdict preferences from others (e.g., "So are we saying that the defendant is liable for this?"), as well as statements that did not in and of themselves reveal an individual's verdict preference but which reflected premature closure more generally (e.g., "Hey guys, we made up our minds"; "Looks like we know how we feel").

To ensure accuracy in coding, two independent raters read through all discussion sections for 35 Discuss condition juries and 13 No Discuss juries.⁸³ No statement was considered a verdict expression unless the two coders both coded the statement, or in the event of disagreement, unless a third coder considered the statement codeable.

In analyzing the coded statements, we asked a series of increasingly specific questions:

First, in how many juries did at least one verdict statement appear during discussion periods? We also asked whether Discuss and No Discuss juries differed in this respect.

Second, we asked whether the statements concerned liability, damages or were simply technical violations. For liability and damage statements, we further examined whether the person making the statement supported the plaintiff, the defendant, or a verdict involving shared liability.

Third, for any given case, we examined how many jurors contributed these statements and how frequently they did so (i.e., in how many ten-minute periods the statements occurred). Thus, even if two cases each had three instances of verdict statements, we distinguished one in which a lone juror made all three statements during one point in time from a case in which three verdict statements appeared across more than one discussion period and were made by more than one juror.

back of her car" were not viewed as having provided a verdict statement because the jurors were instructed by the court that the defendant had in fact been negligent.

83. In two cases jurors were not afforded any opportunities for discussion prior to deliberation.

Fourth, we also noted the section of the trial in which the statement occurred. Examining the timing of verdict statements permitted us to address concerns about how often early verdict preferences occurred before the defense had presented its first witness.⁸⁴

Finally, in addition to examining evidence of violations of the instruction not to make up their minds about the case, we also coded the instances in which jurors expressed awareness of the admonition to remain open-minded until the close of evidence. Such statements could indicate (a) how often jurors demonstrate a recognition that a fellow juror is violating the instructions, and (b) the extent to which jurors police themselves when violations occur.

B. The Frequency of Pre-Deliberation Verdict Statements Across Cases

We found no instances of verdict statements by members of the No Discuss juries.⁸⁵ Thus, the remainder of this Part focuses only on the Discuss condition juries that are described in Table 6.1. Of the 35 Discuss condition juries, 13 (37%) had no verdict statements and 22 (63%) contained at least one verdict statement. Across all of these Discuss cases, a total of 201 verdict statements occurred (range: 0 to 35 per case), for an overall average of 5.74 statements per case. Verdict statements appeared in all types of cases, including motor vehicle cases (n = 10 cases), medical malpractice (n = 4 cases), a contract dispute (n = 1 case), and other tort cases (n = 7 cases).

C. What Type of Statements Are Being Made?

The bottom row of Table 6.1 demonstrates the percentage of statements falling into each of the categories we developed. A total of 31 statements, or 15%, represented technical violations, about half of which involved questions directed at the other jurors, for example: "Does anyone think it's his [the defendant's] fault?"; "Can we reach a consensus now?"; and "Who would not award the plaintiff anything?" Again, these statements were "technical" violations because they did not necessarily indicate the juror's own position, but the speaker was inviting verdict statements from others. Fully two-thirds (n = 135) of all verdict statements concerned liability assessments. As the middle panels of Table 6.1 indicate, 34 statements (17%

84. Typically, this would be with respect to when the plaintiff rested. However, because witnesses sometimes testify out of order, we used a broader criteria of whether a defense witness had testified at all.

85. In one No Discuss trial (a slip and fall case), the jurors did make verdict statements at the very end of the trial, but before receiving final judicial instructions. Jurors began to talk about, for example, how "neither side did anything terribly wrong or were openly negligent"; that the condition of the accident site was "not dangerous [or] unreasonable"; and that the jury might "split [the medical bills] between [the parties] by saying that [the defendant] had 75% of the responsibility and [the plaintiff] had 25%." However, in that case the bailiff mistakenly told the jury that they could begin deliberations when this final break occurred. Up until this point, the jurors had not expressed any conclusions about the case. Because the jurors' statements likely stemmed from the bailiff's error, we do not consider the jury behavior as violating Rule 39(f).

of all statements, 25% of liability-related statements) involved a view that the plaintiff should prevail on liability.

Table 6.1
Number and Category of Early Verdict Statements

Case	Total	Technical	Liability			Damages	
			Pro-Plaintiff	Pro-Defense	Both	Pro-Plaintiff	Pro-Defense
A (MV)	35	1	1	30	1		2
B (Tort)	19		7	9			3
C (Tort)	17	5		12			
D (MV)	15	5		3	5		2
E (MV)	14	5		2			7
F (MV)	14		2	3			9
G (Med)	13	1	4	7	1		
H (Tort) ^a	9	6				3	
I (Med)	9	1	1	7			
J (MV) ^a	9	2	1	4			2
K (MV)	6		4		1		1
L (Tort)	6	1	3	2			
M (MV)	6	1	3			1	1
N (Tort)	5		2	1			2
O (MV)	5		1	1	2		1
P (MV)	4	1	1		2		
Q (Cont)	4	1		3			
R (Tort)	3		1	2			
S (Tort)	3		2	1			
T (MV)	2			1		1	
U (Med)	2	1	1				
V (Med)	1			1			
Totals	201	31	34	89	12	5	30
(% of total)		(15%)	(17%)	(44%)	(6%)	(2%)	(15%)

Notes: ^a Indicates that some liability was conceded in the case.

MV = Motor Vehicle; Med = Medical Malpractice; Cont = Contract; Tort = Other tort cases

Eighty-nine statements favored the defense on liability (44% of all statements; 66% of liability statements), and another 12 (6% of all statements, 9% of

liability statements) asserted that both parties were at fault. Jurors frequently revealed their liability preferences explicitly, saying, for example:

- “[The plaintiff] was an egg with a crack already in it . . . and [the defendant] shattered the egg . . . and . . . is responsible.”
- “I don’t think [the defendant] was negligent, personally.”
- “From 0 to 100, [the defendant] is 0% guilty in my mind.”

On other occasions, liability preferences were evident from statements that the plaintiff “isn’t even hurt,” that the plaintiff should get “zero” in damages, or that an emotional injury (the entirety of the plaintiff’s complaint) was not a real injury.

Finally, 17% of all statements expressed preferences about damage awards (see right side of Table 6.1). Five of these favored the plaintiff (e.g., “One million [dollars] doesn’t seem that extravagant to me.”). However, the bulk of all damage-related statements (86%) favored the defense ($n = 30$, which was 15% of all statements). Examples of the latter include: “Maybe she [the plaintiff] could have had [some injuries] but not \$12,000 worth, I’m sorry.”; “We can just throw the depression [claim] out.”; and “Pain and suffering? There’s no evidence.”

D. The Frequency of Verdict Statements Within Cases

Although the data indicate that verdict statements do occur in the Discuss cases, it is useful to know—within each of the cases—the extent to which verdict statements permeated discussions, in particular the number of jurors expressing these sentiments, as well as whether they were isolated conversations at one point in time versus comments occurring across multiple opportunities for discussion. Table 6.2 reports this information.

First, the third column of Table 6.2 indicates that, of those cases with any early verdict statements, the number of jurors expressing a verdict statement ranged from one to seven per case. Across all 35 Discuss cases, an average of 2.5 jurors per case contributed these statements.

With respect to how frequently these statements appeared within cases, the fourth column of Table 6.2 reports that for the 22 cases in which verdict statements occurred, in four cases they occurred in just one ten-minute period; in another five cases, they were present in only two. In other words, in 41% of the 22 cases with any verdict statements, a small number of the statements appeared in just one or two available discussion periods, suggesting only brief or sporadic conversations. In another 36% of cases with verdict statements, the statements occurred in between three and four discussion periods. The remaining 23% of cases had early verdict statements across a greater number of periods: in one case, verdict statements appeared in six distinct ten-minute periods (with 19 overall statements); in another, they occurred in six (13 statements overall), and in three cases, such statements were offered in five ten-minute periods (range: 9–17 statements overall).

Table 6.2
Within-Case Frequency and Timing of Early Verdict Statements

	Total	N Jurors	N Periods (Out of)	% of Periods	N Before Defense Witness	N Rule Awareness Comments
A (MV)	35	6	3 (7)	43	0	5
B (Tort)	19	6	6 (80)	7	1	0
C (Tort)	17	4	5 (25)	20	0	2
D (MV)	15	6	4 (14)	29	10	0
E (MV)	14	6	3 (10)	30	1	1
F (MV)	14	7	4 (15)	27	2	0
G (Med)	13	7	6 (77)	8	2	6
H (Tort)	9	4	5 (42)	12	0	4
I (Med)	9	4	4 (85)	5	0	0
J (MV)	9	4	4 (32)	13	1	2
K (MV)	6	4	4 (13)	31	4	4
L (Tort)	6	5	2 (22)	9	0	0
M (MV)	6	3	3 (7)	43	6	2
N (Tort)	5	3	5 (67)	7	4	1
O (MV)	5	4	2 (14)	14	3	0
P (MV)	4	3	1 (4)	25	4	2
Q (Cont)	4	3	1 (9)	11	0	0
R (Tort)	3	2	2 (22)	9	3	0
S (Tort)	3	2	1 (22)	5	3	0
T (MV)	2	2	2 (16)	13	0	1
U (Med)	2	2	2 (26)	8	0	1
V (Med)	1	1	1 (32)	3	0	0

MV = Motor Vehicle; Med = Medical Malpractice; Cont = Contract; Tort = Other tort cases

Note that verdict statements could emerge across a greater or lesser number of breaks simply because cases vary in length, presenting more or fewer opportunities for jurors to state opinions about verdict-related issues. Another indicator of frequency, therefore, was obtained by considering the *percentage* of periods in which a verdict statement occurred. This information appears in the middle portion of Table 6.2. On average, early verdict statements occurred in 11% of available discussion periods. Percentages ranged from a low of 3% (Case V) to a high of 43% (Cases A and M). Those cases with a relatively high number of overall statements (i.e., Cases A through J, in the top half of the table, all of which had nine or more statements), fell into two distinct categories. For five of these trials (two tort cases, two medical malpractice and one motor vehicle case), the cases were fairly lengthy (all had 32 or more ten-minute periods available for discussion). Thus, verdict statements, while relatively numerous, occurred with low frequency, i.e., in 15% of periods or less. For the other cases in the top half of the table (four motor vehicle cases and one tort case), verdict statements appeared to permeate the discussion periods to a much greater extent, occurring in between 20% and 43% of available discussion periods. Thus, a high level of verdict statements appeared in some cases that were longer (and likely to be more complex) and that simply provided more opportunities for statements to "cross the line" into impermissible areas. On the other hand, frequent verdict statements were also observed in some shorter cases, in particular, a subset of the motor vehicle torts.

E. The Timing of Verdict Statements

As noted above, a particular concern about Rule 39(f) is not only that discussions of verdicts will take place during pre-deliberation periods, but that these will occur even before the defendant has had a chance to present his or her side of the case. The next-to-the-last column of Table 6.2 demonstrates the timing of early verdict statements in the context of how the trial progressed. Specifically, despite the concerns about the timing of the defense's case, verdict statements were far more likely to appear *after* the defense had presented its first witness than before. Seventy-nine percent of all verdict statements came from discussion periods that occurred after a defense witness had testified. Although a majority of cases (14 of the 22) followed this pattern, in the remaining eight cases with verdict statements, the majority of statements occurred before the jury had heard from the defense (Cases D, K, M, N, O, P, R and S in Table 6.2).

More noteworthy than the timing was the tenor of the verdict expressions. Statements occurring prior to the defendant's case did not necessarily favor the plaintiff. Consider Case D in Table 6.2, a motor vehicle accident, in which most (10 out of 15) of its verdict statements appeared while the plaintiff's case was still ongoing. By this time, the jurors had heard from the plaintiff, his treating physician and two other plaintiff's witnesses. The group began noting that the case was a "waste of time" and that people should not take "everything to court and drag everything through the mud." They further stated that both parties were in the wrong, finally claiming:

Juror 9: Can we reach a verdict now?

Juror 2: Yes, we can. They're the ones having the problem.

Juror 7: Can we throw this out of court? . . .

Juror 9: I know, exactly.

In the break following testimony from the defense, jurors in this case made more explicit statements that the defendant was not at fault at all and that they would not consider giving any money for pain and suffering.

For 10 of the 22 cases with any early verdict statements, at least one such statement appeared during the last break available to jurors for discussion. Of course, the appearance of early verdict statements in the last discussion break may still cause concern. Depending upon the timing of the break, the jurors may not have heard all of the final witness's testimony, may not have heard all or any of closing arguments, and may not have heard final instructions from the judge. Nevertheless, it bears mentioning that in two cases, some verdict statements occurred in the last discussion break that followed the plaintiff's closing argument, and the statements reflected jurors' immediate reactions to the plaintiff's *ad damnum* request. Thus, in one motor vehicle case, a juror exclaimed that it "burns my butt" that the plaintiff's attorney asked for over \$100,000 for the accident. In another, a juror stated that she would "never" give the plaintiff the \$80,000 the attorney asked for in closing arguments. Although these statements are premature in terms of the letter of the law, the timing of these reactions reduces the likelihood that they would be changed by hearing final instructions.

F. Jurors' Responses to Verdict Statements

As we noted in Section D, it was not uncommon for more than one juror in a case to make a verdict statement. In one sense, the existence of verdict statements from multiple jurors suggests, indirectly, that jurors were not effectively policing one another and enforcing the judge's admonition. However, the number of jurors who make early verdict statements is not a direct measure of jurors' awareness of the need to hold off in forming opinions about the case. We examined such awareness more explicitly by coding instances in which jurors stated reminders to themselves or to one another that they should not be coming to conclusions about the case during the discussion periods.

As with the relationship between verdict statements and conclusions about the case, we cannot know with certainty how jurors processed the verdict statements made by other jurors. There are several ways that jurors could have reacted to an individual juror's statements. In their own minds, other jurors may have dismissed the expressed sentiments, thought negatively of the speaker, or used silence as their regulatory response. What is documented here are *explicit* statements which remind the group that they have not heard all the evidence yet and that they should reserve judgments. To be coded in this category, the juror's statement had to occur around the same time as the verdict statement (i.e., at least in the same period as when the statement was made) and the jurors had to give explicit notice of the need to reserve

judgment.⁸⁶ As with verdict statements, two coders had to agree that the statement suggested that jurors reserve judgments.

The final column of Table 6.2 (labeled "N Rule Awareness Comments") reports results of this analysis. Across all cases with verdict statements, there was a total of 31 statements (ranging from 0 to 6 per case) reminding jurors explicitly that they had not heard all the evidence and should wait to make a decision. At least one of these statements occurred in 12 of the 22 cases (55%) with verdict statements.

Typically, jurors' rule awareness comments were presented gently. People tended to acknowledge what was being said by others but simply added a reminder about the need for instructions (e.g., "That's why we have to wait for the judge to talk . . . what are the laws of the state?") or by pointing out that they do not yet have all the evidence. An example of the latter is as follows:

Juror 2: It is pretty much cut and dry that the defendant caused the accident, but it comes down to damages.

Juror 6: I'm leaning that way but am reserving judgment until I see the videotape [testimony from one of the witnesses] because that will add some complexity.

In other instances, the jurors simply restated the rule: "We have to keep an open mind and listen to the testimony." Only in rare instances did jurors seem at all confrontational about rule violations, as in this tort case in which one juror tried to assess where people stood on damages:

Juror 4: (asking the group) Do you think there is anybody who would opt to not award [the plaintiff] anything?

Juror 9: (shakes her head)

Juror 2: (asking Juror 4) Are you taking a preliminary vote right now?

Juror 4: No, no, I'm just curious, wondering if there's anyone out there who would look objectively and say [the plaintiff is all at fault].

Juror 9: I can't imagine . . .

86. Notably, this coding strategy does not take into account more surreptitious ways that jurors might try to make others aware of the admonition to refrain from conclusions about the case. Jurors might, for instance, suggest what the jury's charge will likely be (e.g., "I think that first we are going to have to decide if the defendant did anything wrong at all, then we'll talk about money"), or they might make general statements about some of the witnesses from whom they will hear (e.g., "Well, I guess they are bringing in her doctor to talk about the injuries"). These types of statements *do* indicate an awareness that jurors have not yet heard the entire case. However, because it is difficult to discern whether the intent of the statement is to remind an erstwhile juror of a violation versus simply to rehearse what a juror knows about the case, such statements are not considered in the analysis reported here. Likewise, reminders had to be articulated. For example, a juror in one case declared, "The [plaintiff] isn't even hurt," and another juror responded by patting the speaker on the shoulder and saying, "Now, now," which was greeted by others with laughter. The respondent was probably gently castigating the speaker, but we cannot say this with certainty. Thus, corresponding to our approach with verdict statements, we opted for conservative operationalization of jurors' awareness that discussion was violating the judge's instruction.

Juror 2: I'm trying to figure out what you're asking.

Juror 4: Would anyone not award him any money at all?

Juror 2: So, you're taking a preliminary poll of our views?

Juror 5: (asking Juror 4) You mean after you've heard all the facts?

Juror 4: I'm just curious if anyone thinks he's not justified in getting anything and the defense, what are they thinking?

Juror 5: I'm leaving it open right now.

Juror 8: I don't have an opinion right now. I keep thinking back and forth in my mind, but then I remind myself to not think, just wait till everything is done.

In the above case, the jurors' comments about the need to reserve judgments finally put a stop to Juror 4's improper investigation of viewpoints. It should be noted that we coded all instances in which a juror made a statement acknowledging the rule, not merely those that successfully terminated the conversation. Indeed, in a few cases, jurors pointed out the need to hold off on expression of opinions only to have the other jurors continue to express their opinions about the appropriate outcome.

G. Summary

According to these data, verdict statements occurred only in Discuss condition cases (0 statements coded in the No Discuss group) and occurred in the majority of these cases (22 out of 35). The statements typically concerned liability, typically favored the defense, and typically occurred after at least one defense witness had testified. Further, these statements were unlikely to be met with commentary from other jurors about the judge's instructions not to make up their minds (just 31 such statements were coded). On the other hand, within cases, verdict statements occurred with only limited frequency (emerging, on average, in 11% of discussion periods); this was particularly descriptive of longer and more complex cases. In addition, statements typically did not involve the majority of jurors (on average 2.5 jurors contributed statements). Thus, apart from a subset of shorter (usually motor vehicle) cases which had a high number of early verdict statements, this conduct was by no means rampant.

Because no early verdict statements were observed in the No Discuss cases, there is little doubt that the Discussion innovation is related to the likelihood that these statements will occur prior to deliberations. When jurors are allowed to discuss the evidence, these statements can and do arise on occasion during pre-deliberation discussions. The descriptive portrait of these data, however, cannot address two critical questions that would shed light on the effects of Rule 39(f): (1) whether these early verdict statements reflect firm positions which will be unchanged as a result of exposure to further evidence or formal deliberations; and (2) whether the mere expression of statements compromises the views of other jurors and leads the jury—as opposed to the individual juror—to premature closure on a case.

As we noted in Part VI.A, it is all but impossible to determine a satisfactory answer to the second question, i.e., whether the expression of early verdict

preferences in a case *causes* the jury to arrive at a particular verdict. We cannot know whether the early expression of anti-plaintiff sentiments led, for instance, to a particular liability verdict, a less sympathetic view of the plaintiff's injuries, or to a lower damage award than might have occurred on a jury that had no early verdict statements. It may be that the evidence in the case causes opinions that are expressed during both discussions and deliberations. The only scientific way to test for the effects of early verdict statements would be to assign the same case to two groups of different juries, with one group of juries allowed to discuss the evidence and the other not. Researchers could then look for the discussion-group juries in which early verdict statements both occurred or did not occur, and final verdicts could then be compared across No Discuss cases and Discuss cases with and without early verdict statements. Ideally, this procedure would be conducted on a whole series of different types of cases. This is obviously an impractical study to carry out, other than as a simulation, and may still present uncertainties about causation.

Thus, we would argue that these data cannot reveal the ultimate effect of individual jurors' early verdict statements on other jurors. What we can do is examine what the judges' verdicts would have been in the exact same cases in order to gauge—very indirectly—whether juries in cases with early verdict statements are returning results that diverge more or less from the views of other observers of the case. We describe this analysis in Part VII.

On the other hand, the first question—about the malleability of jurors' early verdict statements—better lends itself to additional empirical examination with our data. As will be described in Part VII, we examined liability-related judgments as predictors of an individual juror's positions at the beginning and end of deliberations in order to see how often individual jurors changed the positions they had expressed during discussions. For this analysis, we would note that consistency need not reflect a closed mind—once again, the evidence in the case may account for statements expressed during both discussions and deliberations. However, evidence for *inconsistency*—that expressed opinions changed between discussions and deliberations—would indicate that jurors' statements do not reflect fixed, unchangeable preferences.

VII. THE IMPACT OF DISCUSSIONS

In previous Parts we have described the ways in which jurors used the breaks in the trial for discussion. We turn now to the jury deliberations in order to investigate the connection between discussions during the trial and the way that jurors go about reaching a verdict in the case. This connection is explored in multiple ways, each testing the predictions of proponents and critics of the discussions innovation.

We begin by comparing the timing of the first votes on the Discuss and No Discuss juries⁸⁷ and the total length of their deliberations. Next, we compare the verdicts of the Discuss and No Discuss juries and their rate of agreement with the

87. In the comparisons in this part between the Discuss and No Discuss juries, we are referring to the 42 cases, 30 Discuss and 12 No Discuss, that were randomly assigned to the Discuss and No Discuss conditions. In contrast, when we describe results from the "complex Discuss cases," we are referring to the seven complex cases that were not subjected to random assignment and were all permitted to discuss the case in the course of the trial.

judge's verdict. We then take a closer look at the positions taken in deliberations by individual jurors who expressed verdict preferences during discussions, comparing the relationship between the frequency of those early verdict statements with the rate of agreement between judge and jury on the ultimate verdict. We turn next to an analysis of the questions jurors asked when they were and were not permitted to discuss the case, both during the trial and during deliberations, to assess how the opportunity to exchange information with fellow jurors in the course of the trial can affect the way that jurors process trial information and formulate impressions. Finally, we examine the post-deliberation reactions of the jurors to their experiences with discussion, assessing the effects of discussion on (1) ease of comprehension, and (2) juror satisfaction and jury cohesiveness.

A. The First Vote

If jurors are permitted to discuss the case in the course of the trial, they may take an earlier first vote because the opportunity to discuss the case before deliberations prepares them to reach a swift resolution of the issues. Alternatively, the jurors may engage in a more thorough deliberation and therefore take a later first vote. We tested these possibilities by identifying and comparing when the first vote occurred in the Discuss and No Discuss juries.

It is very important to specify how we determined when a vote had occurred, because in reality a vote by the jury is not as unambiguous as it might appear to be in the abstract. Although it is easy to picture a formal vote on whether the plaintiff is liable, with each juror filling out a secret ballot or raising a hand in response to a question from the presiding juror, juries typically do not organize themselves so formally. Juries sometimes begin their deliberations by taking a first vote "to see where we stand," but more often, even when one of the jurors calls for a first vote, voting is derailed by one or more jurors who want to discuss the evidence before taking a position. Moreover, jurors may take a vote on one of a number of component issues rather than on the ultimate verdict. For example, they might decide to vote on whether they believed a particular witness; this vote may have clear implications for the verdict, but it is not, in itself, the same as a vote on liability or damages. In addition, a member of the jury may call for consensus ("Are we all agreed that she was injured?") and the group may implicitly or explicitly agree or disagree.

We considered a vote to have occurred if at least six jurors⁸⁸ expressed an opinion on a verdict or verdict component of liability or damages (e.g., the defendant was negligent; the defendant's negligence caused the accident; the plaintiff should receive \$600 for lost wages). The issue being voted on was included if it involved at least one of the elements in the judicial instructions that one of the parties had to

88. The typical Arizona civil jury verdict is the result of deliberations by eight jurors, unless an alternate is retained for deliberations or a juror becomes unavailable in the course of the trial. Thirty-nine, or 78%, of the fifty juries in this sample had eight members who completed deliberations; seven, or 14%, had more than eight, and four, or 8%, had fewer than eight.

prove to establish liability,⁸⁹ or if it involved at least one of the elements on the damages list (e.g., medical expenses or lost earnings). Regarding decisions on damages, the vote did not have to be on a specific number, but it had to be specific enough to identify a particular numeric range or to exclude a particular number (e.g., "The award should be between \$X and \$4X"; "\$X is not enough"; "What percentage of a particular doctor's bill should be paid?"). A vote could occur either formally or informally, but at least six jurors had to indicate their position in a formal vote or through an oral statement or physical signal such as a nod within 25 "turns"⁹⁰ of a call for a vote or an expression of a position that initiated the vote.

There was little difference between Discuss and No Discuss juries in the timing of first vote. On average, the first vote took place 21 minutes after deliberations began in the 28 Discuss cases⁹¹ and 20 minutes after deliberations began in the 12 comparison No Discuss cases. There was, however, some other evidence that immediate votes were more likely to take place in the Discuss cases: 11 of 28, or 39%, occurred in the Discuss cases within the first ten minutes of deliberations versus 2 of 12, or 17% in the No Discuss cases. These data are summarized in Table 7.1.

Table 7.1
Timing of First Vote

	Discuss (28)	No Discuss (12)
<10 minutes	39% (11)	17% (2)
10-20 minutes	25% (7)	50% (6)
>20 minutes	36% (10)	33% (4)
	100%	100%

Although the numbers are small and the differences are not statistically significant, the pattern shown in Table 7.1 is consistent with the predictions of some proponents of the innovation that Discuss juries would be more likely to take an early vote. Nonetheless, the opportunity to discuss the case was not consistently associated

89. Elements of liability in a standard motor vehicle case, for example, might be that the defendant was negligent, that the plaintiff was injured, and that the defendant's negligence caused the plaintiff's injury.

90. A "turn" was defined as a contribution from a juror that continues until another juror speaks; a new turn does not occur if a juror continues talking after being interrupted mid-sentence by another juror, although the interrupting juror's contribution counted as a turn.

91. The two Discuss cases in which jurors had no breaks in the course of the trial that would permit them to talk about the case were excluded from this average and from Table 7.1. The first vote on one of these two juries occurred after three minutes; the first vote on the other occurred after 109 minutes.

with early voting. Juries in the longer, more complex cases tended to postpone voting even when they were permitted to discuss the case during trial.

Our examination of the timing of the first vote on the seven complex Discuss cases not included in Table 7.1 reveals that five of the seven (71%) juries deliberated for more than 20 minutes before taking their first vote, and the cases in this group as a whole averaged 75 minutes before a first vote was taken. Since we do not have a comparison set of complex cases in the No Discuss condition,⁹² it is unclear whether this average pre-vote deliberation time of more than an hour would have been different for juries in complex cases who lacked an opportunity to talk about the case during the trial. The pattern does suggest, however, that jurors in longer, more complex cases are more inclined to defer voting until they have engaged in some deliberation than are those in simpler and less complex cases. Indeed, across all 50 cases in the sample, including the eight complex cases, there was a substantial positive correlation between the length of the trial and the timing of the first vote.⁹³ That is, the longer the trial, the longer were the pre-vote deliberations, suggesting that jurors respond to more evidence by giving it more processing time before taking a vote. The heavier evidentiary load of the longer or more complex case increases the likelihood that jurors will adopt what has been called an "evidence-driven" approach, rather than a "verdict-driven" approach.⁹⁴

B. The Length of Deliberations

Proponents of Rule 39(f) suggested that the opportunity to discuss the case during trial might lead to shorter deliberations. Our comparison of the deliberation times of the Discuss and No Discuss cases revealed that jurors permitted to engage in discussions during trial did take less time to reach a verdict during deliberations. Deliberations in the 28 Discuss cases with breaks averaged 91 minutes, while in the No Discuss cases they averaged 117 minutes. Because the sample of cases is small and the deliberation times were highly variable, ranging from 10 minutes to seven hours, the average difference of 26 minutes was not statistically significant, although it was in the predicted direction.⁹⁵ The primary predictor of the length of deliberations across all 50 cases was the length of the trial.⁹⁶

C. Jury Verdicts

A primary concern associated with allowing jurors to discuss the case in the course of the trial was a fear that a primacy effect would lead jurors to coalesce around the plaintiff's version of the case and be less responsive to the defendant's

92. In the single complex No Discuss case, the jurors took their first vote 30 minutes into their deliberation.

93. $r = .61, p < .001$.

94. REID HASTIE ET AL., *INSIDE THE JURY* (1983); Marlys Sandys & Ronald C. Dillehay, *First-Ballot Votes, Predeliberation Dispositions, and Final Verdicts in Jury Trials*, 19 *LAW & HUM. BEHAV.* 175 (1995). Note that with the opportunity to discuss the case in the course of the trial, a vote at the beginning of deliberations, a traditional defining characteristic of a verdict-driven jury, has a more ambiguous meaning.

95. $t < 1$.

96. $r = .69 (p < .001)$.

witnesses who typically appear only later, in the second part of the trial. Thus, a fundamental comparison between the Discuss and No Discuss cases is between the verdicts the jurors reached in the two groups of cases. Bearing in mind that the sample is quite small, there is no evidence that plaintiff win-rates were higher in the 28 Discuss cases that provided the jurors the opportunity to discuss the evidence⁹⁷ than in the 12 No Discuss cases. Nor were the mean awards higher in the Discuss cases. These data are summarized in Table 7.2.

Table 7.2
Outcome Measures

	Discuss (28)	No Discuss (12)
Plaintiff verdict	64%	67%
Defense verdict	36%	25%
Hung jury	—	8%
	100%	100%
In cases with plaintiff's verdicts:		
Mean award	\$31,912 ⁹⁸ (17)	\$38,174 (8)

An additional way to examine these verdicts is to compare them with the verdict that the judge said he or she would have given had the case been decided in a bench trial. The judges in four cases (three Discuss cases and one No Discuss case) did not indicate whether or not they would have found the defendant liable. In the remaining 25 Discuss cases with at least one opportunity to discuss, the judge and jury agreed that the plaintiff should receive an award in 17 of 25 or 68% of the cases, and agreed on a defense verdict in an additional five cases, for a total agreement rate of 88%. In all three of the disagreement cases, the judge would have found for the plaintiff, but the jury found instead for the defendant. The 11 No Discuss cases which had a verdict preference from the judge produced an agreed verdict for the plaintiff in

97. One of the two Discuss cases with no breaks resulted in a verdict for the plaintiff; the other resulted in defense verdict.

98. This mean value excludes the single case in the Discuss sample that resulted in a \$2.8 million verdict. That verdict far exceeded that of any other case in the total sample. The next highest verdicts were \$1.2 million and \$300,000, both among the eight complex cases. Despite the large amount in controversy, the case with the \$2.8 million verdict was not a complex case, so it was retained in all comparisons with the exception of this one. The case involved a motor vehicle accident that resulted in severe and permanent injury; liability was not disputed and the plaintiff argued for a \$4 million verdict, while the defense argued that the award should not exceed \$1 million. Had we included this obvious outlier in Table 7.2, it would have substantially distorted the mean award for the Discuss cases. The mean award would have more than quintupled, from \$31,912 to \$185,695.

7.5⁹⁹ of 11, or 68%, of the cases, and the jury decided in favor of the defendant while the judge would have made a plaintiff's award in three of the cases. The number of cases in this sample is too small to draw any firm conclusions, but the verdict pattern provides no suggestion that the opportunity to discuss the case during the trial leads the jurors to be more favorable to the plaintiff than the judge would be.

An examination of awards in the cases in which the judge and jury agreed that the plaintiff should receive an award indicates that the judges would generally have been at least 10% more generous: in 10 of the 16 Discuss cases (62%) where the judge indicated an award preference, and in five of the seven No Discuss cases (71%), the judge would have awarded more than the jury did.¹⁰⁰ On this measure there is again no evidence that discussions improved the plaintiff's chance for a particularly generous award from the jury.

D. Tracing Early Verdict Preferences by Individual Jurors

Although we found no evidence of juries reaching a group verdict before the end of the trial, Part VI provides evidence that individual jurors in 22 out of 35 Discuss cases expressed some verdict preference in the course of their discussions during the trial. As we pointed out in Part VI, it is unclear how often the views that the jurors voiced during discussions were, or were seen by fellow jurors as, firm commitments to a particular position. Similarly, it is unclear how often the expressed positions were, or were seen as, tentative expressions of a potential way of characterizing the evidence at that moment, but not indelibly fixed.

1. Early Positions and Later Voting

A major concern raised about permitting juror discussions during trial has been that jurors who express an early position during the trial will be less open to influence by the events and instructions that occur later in the trial. Although we cannot know how each juror who voiced a verdict preference during discussions would have behaved during deliberations if he or she had not been permitted to talk about the case, we were able to examine what jurors said and how they voted during deliberations. If expressing a verdict preference during discussions locked jurors into that position, jurors who voiced verdict preferences during their discussions should have maintained the same position in deliberations. Thus, we compared the verdict statements during discussions with both the position taken by these jurors early in deliberations, and their position on the final vote of the deliberations.

Focusing on the decision on liability, we examined the 19 cases in which verdict preferences on liability were expressed during the trial,¹⁰¹ eight cases (42%)

99. The case in which the jury was unable to reach a verdict on liability was treated as .5 of a plaintiff verdict and .5 of a defense verdict.

100. We considered a difference in award to exist if the larger award was at least 110% of the lower award. In one Discuss case, the judge's award was less than 10% more than the jury's awards, in one the jury's award was less than 10% more than the judge's award, and in one No Discuss case the awards were nearly identical.

101. We excluded three cases from this analysis. In one case, the only juror who expressed an early liability verdict preference became the alternate and was excused from

included one or more jurors who changed their position (e.g., at some point during the trial the juror took the position that the defendant *was* liable, but her first expression of a position in the deliberations expressed the view that the defendant *was not* liable). By the time the jury took its final vote, jurors in 11 of the 20¹⁰² cases (55%) had changed from the position they had expressed during the trial.

While these figures provide some evidence of movement that is inconsistent with a picture of unwavering commitment to early verdict preferences expressed during discussions, it is impossible to know whether greater or lesser movement would have occurred in the absence of discussion. The jurors on the No Discuss juries did not express verdict preferences to the other members of the group, but they too may have had early verdict preferences, not publicly voiced, that did not change either during the remainder of the trial or even in the course of deliberations. Indeed, even jurors on the Discussion juries who were silent may have formed verdict preferences independently of the voiced preference. Moreover, it is worth noting that a majority of the cases (13 out of 21 in which liability was disputed) stimulated both pro-plaintiff and pro-defendant verdict preferences, providing the majority of juries with a variety of perspectives that could have the effect of discouraging premature closure.

Among the remaining eight cases in which liability was disputed but early verdict statements all favored one side, some may simply have been easy cases to decide, so that the early evidence was clear and accurately foretold how the case would develop. Case C¹⁰³ was probably such a case. It stimulated 12 pro-defense verdict statements by five different jurors and no pro-plaintiff verdict statements. The judge rated the case as a 6 on the 7-point scale, with 1 indicating that the evidence strongly favored the plaintiff and seven that it strongly favored the defendant. Not surprisingly, the judge in Case C would have found for the defendant.¹⁰⁴

2. The Judge's Verdict Preference When Jurors Made Early Verdict Statements

The judge's verdict offers one more way to examine the potential role played by early verdict statements in influencing jury verdicts. If these verdict statements during discussions influenced jury decisions based on an incomplete and inaccurate picture of the evidence, we might expect to see greater disagreement between judge and jury when members of the jury more actively expressed early verdict preferences.

Recognizing that we have a small sample available for analysis, Table 7.3 divides the 35 Discuss cases¹⁰⁵ into three categories: those in which no early verdict preferences were expressed, those in which one to six were expressed, and those in which nine or more were expressed.

deliberations. In another case, the jury took an early first vote that was divided, but anonymous, so juror positions in that case could not be identified. In a third case, liability was uncontested.

102. The additional case was the one in which the first vote was anonymous and thus could not be included in the tally for initial verdict expressions during deliberations.

103. See Table 6.1, *supra* Part VI.

104. Among the 47 cases in which the judge gave a rating on this measure, the judges rated 36, or 78%, of them as more closely contested.

105. The 35 cases include the complex Discuss cases, but not the two Discuss cases in which no breaks occurred in which discussions could take place.

Table 7.3
Judge-Jury Agreement and Early Verdict Statements

	Number of Early Verdict Statements		
	None	1-6	9 or more
Judge/Jury Agreement	(11)*	(11)**	(10)
Both for plaintiff	8	7	5
Both for defendant	3	3	1
Judge for pl./Jury for def.	0	1	3
Judge defendant./Jury for pl.	0	0	1

*In two additional cases the jury found for the defendant and the judge gave no verdict response.

**In one additional case the jury found for the plaintiff and the judge gave no verdict response.

The table reveals some increase in disagreement rates between the judge and jury for the cases with the largest number of early verdict statements, so it is worth examining in more detail the four disagreement cases that occurred among the group with nine or more early verdict statements (i.e., the three in which the judge found for the plaintiff but the jury found for the defense and the one case with the opposite result).

Two of the cases involved motor vehicle accidents in which there was an allegation of comparative negligence. The judge would have divided fault, awarding some damages to the injured plaintiff; the jury in both cases found for the defendant. During their discussions in the course of the trial, the jurors appeared to believe that the plaintiff could not recover unless the defendant was solely responsible for the accident and some of their verdict statements took the form: "Well, they're both responsible, so why don't we just send them home?" The juries in both cases learned only at the end of the trial during closing arguments and in the judge's final instructions that they could divide responsibility for the injury. There is no way to determine whether the jurors, as a result of their discussions during the trial, were less influenced by the comparative fault instruction and consequently more likely to reach a verdict in favor of the defendant. It does appear, however, that a simple pre-instruction informing the jurors that they would be asked at the end of the trial to decide how much fault, if any, should be assigned to each of the two parties would have eliminated that threat.¹⁰⁶

The third disagreement case was a complex tort case involving a serious injury with multiple lay and expert witnesses. The case hinged primarily on the

106. In two other Discuss cases with potential comparative fault verdicts, the attorneys made it clear in their opening statements that the case involved an issue of comparative negligence, and the jurors indicated during their discussions that they understood the issue. Although both of these cases had several early verdict statements, the juries in both of the cases reached verdicts in which liability was split between the parties.

disputed chronology of evidence and the credibility of both the lay and expert witnesses. During the trial, several jurors made a number of pro-defendant verdict statements. In deliberations, however, the jurors engaged in a vigorous debate. In the end, one juror voted for the plaintiff, one was undecided, and the remainder concluded that the plaintiff had not carried the burden of proof. The judge would have made a substantial award, but characterized this case as close, giving it a 4, or mid-point rating, on the 7-point scale measuring how strongly the evidence favored one party or the other.¹⁰⁷

The fourth disagreement case was a non-motor vehicle tort case with nine or more verdict statements during discussions which were evenly divided between pro-plaintiff and pro-defendant. The jury made a substantial award, while the judge would have found for the defendant, but the judge nevertheless characterized the case as evenly balanced.¹⁰⁸

3. Summary

Although our ability to trace the impact of early verdict statements on juror behavior during deliberations and on the jury verdicts is limited, there is little evidence of a systematic distortion in trial outcomes due to the views that jurors expressed during discussions. There is some suggestion that a fuller pre-instruction on the potential verdict choices that jurors will have at the end of trial can optimize juror decision-making, whether or not jurors are permitted to discuss the case in the course of the trial.

E. Juror Questions

Juror questions represent a measure of the active involvement of the jurors in the trial. Discussions provide an opportunity for jurors to consult with one another in formulating questions. Thus, if the opportunity to discuss the evidence fosters more juror involvement, we might expect to see more questions being submitted in the Discuss than in the No Discuss cases. On the other hand, to the extent that discussions enable jurors to answer many of their questions by consulting with one another, fewer questions may result with the opportunity for discussion. As Part V demonstrated, jurors in the Discuss cases did use their time to discuss and plan questions, as anticipated by Rule 39(f). In some instances, they helped each other to formulate

107. On the closeness rating scale, 1 = evidence strongly favored the defendant and 7 = evidence strongly favored the plaintiff.

108. The judge's evaluation of these last two disagreement cases as equally balanced is consistent with the overall pattern for disagreement cases in the study. When the judge rated the case as favoring one of the parties, the rate of agreement on liability was 88%; when the judge rated the case as equally balanced, the rate of agreement dropped to 72%. See HARRY KALVEN, JR. & HANS ZEISEL, *THE AMERICAN JURY* 157 & tbl. 50 (1966) (reporting a similar pattern with criminal jury cases and finding that judge and jury agreed 91% of the time on whether to convict in cases the judge characterized as clear and 60% of the time in cases that the judge viewed as close). (In the 46 trials in which the judge indicated the verdict that he or she would have given, the rate of agreement between the judge and jury was 35.5 out of 46, or 77%, treating the one hung jury as .5 agreement and .5 disagreement. Kalven and Zeisel obtained an agreement rate of 78%. KALVEN & ZEISEL, *supra*, at 63 & tbl. 16.)

questions or they encouraged a hesitant juror to submit the question she was considering. In other instances, they shared expectations about whether the judge would answer a particular question if they submitted it (e.g., on insurance) or warned that it was too late to submit a particular question because the relevant witness had already been excused.

To assess the overall impact of discussions on the questions that jurors ask, we examined three types of questions: (1) the questions that jurors submitted at trial that the judge permitted a witness to answer; (2) the questions that jurors submitted at trial, but that were not answered;¹⁰⁹ and (3) the questions that jurors asked during deliberations. Although the other topics in this Part relate solely to deliberation behavior and to verdict patterns, we made an exception for juror questions so that we could present in one place the tabulations of all of the questions, whether asked in discussions or in deliberations. The frequencies are reported in Table 7.4:

Table 7.4
Juror Questions

	Discuss	No Discuss	Complex Discuss
	(27)	(11)	(7)
Question submitted during trial*	13.85	14.91	35.43
Juror questions answered during trial	9.85	11.91	30.71
Juror questions unanswered during trial	4.00	3.00	4.71
Question asked during deliberations**	0.82	1.00	2.43

*Two cases (one Discuss case and one No Discuss case) were not included in the table because court files were unavailable to indicate which, if any, of the questions that jurors submitted at trial were not asked of the witness or answered by the judge. Two additional Discuss cases were not included because no breaks occurred that would have allowed discussions during the trial.

**All questions submitted during deliberations received some response from the court. The table shows the questions asked during deliberations for the 45 cases with data available on questions submitted during the trial. The corresponding values for the deliberation questions from the full 50 cases were .90 (30 Discuss cases), .92 (12 No Discuss cases), 2.43 (seven Complex Discuss cases), and 5 (the single Complex No Discuss case).

The number of questions submitted during trial varied widely, from 0 to 110 in the complex Discuss cases, and from 0 to 66 in the other cases. Across all 50 cases, however, 47, or 94%, of the juries submitted at least one question in the course of the trial, and the judges allowed witnesses to answer a majority of the submitted questions. Compared to jurors in the Discuss cases, jurors in the No Discuss cases asked, on average, somewhat more questions that the judge permitted a witness to answer

109. These questions included those that the judge did not specifically acknowledge and questions that the judge responded to by telling the jurors that the question could not be answered (e.g., "you should not be concerned with the issue of insurance").

(11.91 versus 9.85), and somewhat fewer that the judge disallowed (3.00 versus 4.00). Neither difference was statistically significant.

We also examined the nature of the questions that the jurors asked and that judges did not permit a witness to answer.¹¹⁰ This analysis allowed us to test whether the distribution of types of disallowed questions differed for juries who were or were not permitted to discuss the evidence. Although it was not possible in each instance to ascertain why the question was not disallowed, the reason was often fairly straightforward in light of the rules of evidence (e.g., the juror was asking the witness about the state of mind of someone else; the juror wanted information about insurance; the juror was asking about a prior legal determination; the witness had no information on the subject). The primary categories of disallowed questions included: (1) questions about the timeline of events leading to the trial (e.g., "When did the plaintiff decide to see a particular physician?") or testing the causal question at issue (e.g., "Wouldn't the other passenger in the car also have been hurt?") as a means of probing the plausibility of the plaintiff's claim that she was injured;¹¹¹ (2) questions about other missing or unclear facts (e.g., "Was he asked to sign a document that reflected the agreement?"); (3) questions about insurance or prior payments from other sources; and (4) questions about legal or other standards for judging the behavior at issue (e.g., "Did anyone receive a citation?" "What happened to the previous claim?"). Other less common types of questions included questions about the motivation of the witness (e.g., "Is the expert being paid?"); requests for the definition of a term; questions about the internal state or feelings of a witness; questions relating to the character of a party or another witness; and questions about how the plaintiff arrived at the sum of money she was requesting. Many of these questions would have been permissible if the juror had submitted them to an earlier witness, but were not permitted because the juror addressed the question to a witness who had no firsthand knowledge that would qualify him to answer the question. For example, in one case a juror wanted to ask the plaintiff's physician why the plaintiff waited six months after the accident to seek medical help. The judge informed the jury that the question was more appropriate for another witness.

The only question category that produced a different pattern of activity from jurors in the Discuss cases compared to jurors in the No Discuss cases was the category that included legal and other standards. The No Discuss cases produced only one question of this type while nine, or one-third, of the Discuss cases included at least one question about the applicable standards that the judge declined to answer. In some instances, these standards were legally irrelevant (e.g., whether the driver's vision had been tested after the accident and whether he had received his license renewal). Others merely anticipated the instructions that the jurors would receive only

110. Although the original research plan for this project centered on the discussions innovation, another Arizona innovation, not part of the randomized experimental evaluation, permits jurors to ask questions during trial. In a future Article we will focus specifically on the nature of the questions that jurors ask when the courts permit them to submit questions during trial, and the role that those questions play during deliberations.

111. The timeline questions were combined with the questions related to cause because of the overlap between the two. For example, in a case in which the defendant was claiming that the plaintiff's injuries were pre-existing, rather than due to the accident caused by the defendant, a juror submitted a question about the timing of medical treatments.

at the end of the trial (e.g., a juror asked, "How can you be negligent and not be at fault? Is that going to be explained as we go through this?"). In one sense, this pattern suggests that the Discuss jurors were not using their discussion opportunity to vet impermissible questions about applicable standards, but it also may reflect greater activity by the Discuss juries: they were more actively trying to get information on standards that they thought might ultimately help them to reach an appropriate verdict. A number of the questions about legal standards were not answered during the trial, but were addressed in the final jury instructions.

In sum, although jurors who were permitted to discuss the case during the trial did seem to share their knowledge about the procedure and to assist each other in formulating questions when a break occurred at an auspicious time, the pattern of questioning by jurors provided no evidence that jurors who were given the opportunity to discuss the case were more active questioners overall or that they prevented each other from submitting some questions that judges were unable to permit witnesses to answer. While 47 of the 50 juries submitted at least one question in the course of their trial, only 25 of the juries submitted any questions during deliberations.¹¹² In part, this lower rate may reflect the fact that some questions during trial obviated the need to ask them during deliberations and others anticipated evidence or judicial instructions that jurors received in the ordinary course of events later in the trial, but before the time that deliberations began. The lower rate may also partially reflect the simpler process of submitting questions during trial.¹¹³ As Table 7.4 indicates, the juries in the complex cases submitted more questions on average¹¹⁴ and the Discuss juries were no more likely to submit questions than the No Discuss juries. The length of the trial was a strong predictor of how many questions jurors asked during deliberation,¹¹⁵ just as it was of the length of deliberations.

F. Ease in Comprehension

If the opportunity to discuss the evidence during trial facilitates juror understanding of the evidence, jurors permitted to discuss it during trial should report greater ease in comprehension of that evidence. In particular, discussions should increase ease in comprehension of the complex and difficult evidence that poses a particular challenge for jurors. To evaluate those effects, we asked jurors to indicate

112. The number of questions submitted ranged from zero to six.

113. During the trial, the usual mechanics of submitting a question are relatively simple: the judge asks if any jurors have questions, the juror with a question writes it down and hands a slip of paper to the bailiff who gives it to the judge. The judge may consult briefly with the attorneys, but if the question is appropriate, the question is almost immediately put to the witness and jurors learn the answer, or at least the answer that the witness gives. In contrast, during deliberations, the jury must ring for the bailiff, give the bailiff the written question, and wait for a response to be brought back by the bailiff. The process can take some time, especially if the parties must be located for consultation, and the jurors in these cases usually deliberated on other matters while they were waiting.

114. Nicole L. Mott also found that the number of questions and the complexity of the case were positively correlated. Nicole L. Mott, *How Jurors Cope with Complexity: Defining the Issues* (2001) (unpublished dissertation, University of Delaware) (on file with Authors).

115. $r = .49, p < .01$.

how easy it was to understand the evidence and, in cases in which experts testified, how easy it was to understand the expert testimony. We also asked how easy it was to understand the instructions on the law. We did not anticipate that the opportunity to discuss the case during trial would affect ease of comprehending instructions because the jurors are not instructed on the law until the end of the trial.

The judges also rated the cases on these three measures (evidence, experts, and instructions). They rated the Discuss and No Discuss cases similarly on all three,¹¹⁶ providing evidence that any difference for the jurors between the Discuss and No Discuss cases would be attributable to juror reactions rather than to inherent differences in the complexity of the two sets of cases. Table 7.5 shows that jurors reported significantly greater ease in understanding the expert testimony when they had the opportunity to discuss the evidence during trial. Neither of the other comparisons were significant.

Table 7.5
Juror Ease of Comprehension (1 = very difficult, 7 = very easy)¹¹⁷

	Discuss	No Discuss
Ease in comprehending evidence	5.25	5.05
Ease in comprehending expert(s)	5.35	4.65*
Ease in comprehending instructions	6.16	5.85

* $p < .01$ ($F = 6.77$) ($ICC = .22$)

This pattern of results adds support to the notion that discussions are likely to be most helpful to jurors when they are evaluating complex testimony.

G. Satisfaction, Cohesion, and the Reduction of Conflict

As with any small group or committee, a jury may or may not work together successfully. The group can produce a verdict but leave its members with a feeling that the procedures used to arrive at the verdict were unfair if, for example, a single juror dominated discussion or there was insufficient opportunity to air opposing viewpoints. To ascertain whether discussions promoted greater feelings of satisfaction

116. See Table A.4 in Appendix.

117. The measures in the analyses in Tables 7.5 and 7.6 were collected after deliberation was completed. Ratings from members of the same jury can be similar to one another (correlated) simply because the jurors were exposed to the same trial and talked about the case together. This association at the group level is called the "intraclass correlation" (ICC). If the ICC is not taken into account, analyses of the individual jurors may be misleading. The means and statistical tests reported in Tables 7.5 and 7.6 account for this correlation by using a "mixed model" technique. Details on these analyses are on file with the Authors and are available upon request.

and cohesiveness, we used three questionnaire measures and a behavioral measure of cohesiveness. Jurors were asked at the end of deliberations to rate three features of their deliberation: the open-mindedness of their fellow jurors; how influential they personally were in the jury deliberations; and how thoroughly the jury considered all jurors' points of views during deliberations. Table 7.6 gives the results.

Table 7.6
Juror Evaluations of Deliberations*

	Discuss	No Discuss
	(28)	(10)**
Open-mindedness	5.80	5.49
Your influence	4.37	4.22
Thorough consideration	6.04	5.65

*Jurors rated each feature in Table 7.5 on a 7-point scale, from 1 = not at all to 7 = very (How open-minded were the other jurors? How influential were you during deliberations? How thoroughly were others' views considered?).

**Jurors in two No Discuss cases (and one complex Discuss case) received questionnaires originally designed for alternate jurors who did not deliberate. The questions in Table 7.5 were not included on this questionnaire.

Although the means in Table 7.6 are in the expected direction, with jurors in Discuss cases rating their fellow jurors higher in open-mindedness, responsiveness to the juror's influence, and thoroughness, the differences are small and are not statistically significant.

A final measure of cohesiveness is reflected in the form of the jury's final verdict. Juries in Arizona can return a verdict if three-fourths (typically six out of eight) of the members of the jury agree.¹¹⁸ Thus, the jury need not be unanimous. Jurors may, however, return a unanimous verdict if they choose, either because everyone on the jury has come to share the same view, or, as often happens, the minority jurors whose votes are "not needed" may express solidarity with the group by formally approving its choice and making the verdict unanimous, an expression of group cohesiveness. We would predict then, that if the Discuss juries are more cohesive, they should be more likely to end in unanimity than would the No Discuss juries. In fact, 79% of the 28 Discuss juries with at least one break for discussion were unanimous, while only 58% of the 12 No Discuss juries were unanimous. Again, the small sample means that this difference was not statistically significant, but the

118. REVISED ARIZONA JURY INSTRUCTIONS, *supra* note 11, at Standard 15.

difference is consistent with the pattern reflected in the other measures of juror satisfaction and cohesiveness.¹¹⁹

H. Summary

Working with a small, albeit unique, sample of cases, the emerging picture of how juries use the Discussion opportunity suggests that the Rule 39(f) innovation is associated with modest effects. There is some evidence that the innovation encouraged jurors to exchange relevant information without coming to fixed and unchangeable preferences, and little suggestion of any dire consequences. The complex cases in particular revealed precisely the kind of full exchange during trial that the creators of Rule 39(f) envisioned.

VIII. SUMMARY AND CONCLUSIONS

A. Synopsis of the Controversy and the Research Plan

When Arizona instituted the program of jury innovations described in *Jurors: The Power of 12*, the most controversial innovation was Rule 39(f). Under Rule 39(f), jurors in civil cases are instructed that they may discuss the evidence among themselves during trial recesses, but only when all jurors are present in the jury room. They are also told that they should reserve judgment on ultimate issues until they have heard all of the evidence and been instructed on the law. Rule 39(f) is a striking departure from case law and practice in other American jurisdictions that typically have proscribed juror discussions in both civil and criminal trials.

As we discussed in detail in Part II, advocates of Rule 39(f) argued that the innovation would have a number of benefits that include enhancing juror comprehension, helping jurors to ask questions, allowing them to share impressions on a timely basis and test their tentative judgments against other jurors' views, and reducing the likelihood of improper discussions among jurors and between jurors and non-jurors.

Critics of Rule 39(f), however, voiced a number of concerns. Some predicted that permitting discussions would encourage jurors to endorse the testimony they were exposed to at the beginning of the trial. As a consequence, verdicts would then disproportionately favor the plaintiff. Some also feared that the rule would encourage juries to reach premature verdicts. In addition, some anticipated that the rule would actually encourage improper discussions among jurors and between jurors and non-jurors.

The controversy over Rule 39(f) is primarily based on differing assumptions about how permitting jurors to discuss the case in the course of the trial affects juror behavior. The present research provided an unprecedented look into the jury room through the videotaping and analyses of the trials and the discussions and deliberations of 50 Arizona civil juries. The research design also allowed some cases

119. We note that Hannaford et al. did not observe this trend associating higher cohesiveness with the discussion innovation. See Hannaford et al., *Permitting Jury Discussions*, *supra* note 9.

to be randomly assigned to a control group that received No Discuss instructions. Additional data included post-trial questionnaires from the judges, jurors, and attorneys.

B. Findings and Conclusions

To analyze the effects of Rule 39(f), we examined what jurors did during breaks in the trial when interim discussions about the case were permitted. We also compared the discussions, deliberations, and verdicts of juries permitted and not permitted to discuss the case.

To provide a context for what we found, it is worth describing the results that should have emerged if the most optimistic goals of proponents of the innovation had been realized as well as the results that the research should have uncovered if the worst fears of critics of the innovation had been fulfilled. Against this backdrop, we can then examine how what we actually found compared with both of these sets of anticipated results.

1. Optimal Effects of the Discussion Innovation

Jurors permitted to discuss the evidence would use the breaks during the trial to discuss the evidence, raise questions, bolster their recall, and correct misimpressions. The conversations about the case would occur only when all of the jurors were present in the jury room. Jurors would not make statements about verdict preferences that reflected premature fixed judgments about how the case should be decided. If an occasional juror violated this rule, the other jurors would immediately point out the error. The opportunity to discuss the case in the jury room would discourage conversations about the case with non-jurors and among jurors outside the jury room. It would also promote openness and cohesiveness among the members of the jury. Jury deliberations would be more efficient. Neither party would be systematically advantaged by the opportunity to discuss the case during trial, so that the probability that the plaintiff would win would remain unchanged.

2. Feared Effects of the Discussion Innovation

Jurors permitted to discuss the evidence would use the breaks during trial to arrive at premature group decisions on verdicts before hearing all of the evidence and the instructions. Premature decision-making would foreclose full debate and a thorough airing of views. The permission to discuss the case in the jury room would reduce juror inhibitions about discussing the case outside the jury room with jurors and non-jurors. The plaintiff's opportunity to present first would provide an advantage that would result in increased plaintiff verdicts.

3. The Actual Results of the Discussion Innovation

Our analyses reveal that neither of these two extreme visions of the effects of discussion accurately describes how jurors actually used the opportunity to discuss the evidence. The Discuss jurors spent very substantial amounts of time and energy engaged in discussions about the trial. Jurors who were instructed that they were *not*

permitted to talk about the evidence (No Discuss jurors) occasionally made remarks about the case, but their remarks were almost always brief and perfunctory. The longer and more complex the trial, the more Discuss jurors talked about the case. Jurors often used discussion to fill in the gaps in their knowledge, to review testimony and to clarify misunderstandings. They also shared differences in recall and in interpretation of the evidence. In complex cases, when factual questions arose about the evidence, discussion tended to improve the accuracy of recall.

Not all of the juror behavior, however, was consistent with an idealized version of the discussion innovation. One basic rule that the Discuss jurors received was that they should discuss the case only when all jurors were present. In fact, perhaps because the opportunity to discuss the case was so attractive, the jurors frequently ignored this admonition and many substantive discussions occurred when a sizeable number of the jurors were not present in the jury room.

A second prohibition described in the jury instructions was the warning not to take a final position during discussions on what the outcome of the case should be. No jury arrived at a group decision on verdict in the course of discussions, but on several juries the prohibition against taking final positions was violated by individual jurors. Jurors sometimes admonished one another that they should reserve judgment until they had heard all of the evidence and instructions, but the frequency of explicit rejections of such early verdict statements during discussions was low and did not necessarily terminate further verdict expressions. Nonetheless, early verdict statements did not uniformly predict the positions that jurors took on liability during deliberations. Moreover, cases with early verdict statements did not disproportionately favor the plaintiff. In sum, early verdict statements did occur when discussion was permitted, but we found no clear indication that they were responsible for altering case outcomes.

Other indicators showed little evidence that the opportunity to discuss the case during trial affected jury behavior. Although Discuss jurors consulted one another in formulating and deciding whether to submit particular questions to the court during the trial, the Discuss jurors were no more or less likely to ask questions than were the No Discuss jurors. Similarly, jurors permitted to engage in discussion reported no less inclination to discuss the case outside the jury room than did No Discuss jurors, although only a small minority in both groups reported any outside conversations. Finally, the verdict patterns, as well as the rate of agreement with judicial verdict preferences did not differ. We found no suggestion that discussions encouraged jurors to endorse the testimony they were exposed to at the beginning of the trial leading to verdicts that disproportionately favored the plaintiff (a form of "primacy effect"). Nor were Discuss jurors more likely to favor the defendant whose case they heard immediately preceding deliberations (a "recency effect").

For several measures, the small number of cases in the sample may have prevented us from detecting an impact of the Discuss innovation. Discuss jurors were somewhat more inclined to take an early first vote and completed their deliberations more swiftly than did No Discuss juries, but the differences were not statistically significant. The more powerful influence on the delay in taking a first vote and the length of deliberations was the amount and complexity of the testimony that the jurors had to digest. Another trend suggested that jurors permitted to discuss the case

perceived their juries as more open-minded and thorough, but the difference was not statistically significant. Similarly, the Discuss juries were somewhat more likely to be unanimous, suggesting greater cohesiveness, than the No Discuss juries. One important difference did emerge, however. Discuss juries reported significantly greater ease in comprehension of expert testimony, identifying precisely the area in which the Discuss innovation was expected to offer the greatest assistance.

Our findings in several areas are similar to those from the earlier Hannaford, Hans and Munsterman study¹²⁰ that was discussed at the end of Part II, despite the fact that their methodology involved post-trial questionnaires of jurors rather than direct observation of jurors and involved juries in other Arizona jurisdictions as well as a sample of Pima County juries. Jurors in their survey reported that they did not uniformly follow the instruction to discuss the case only when all jurors were present, but they also indicated that they generally did not reach final decisions on verdicts during discussion. The jurors said that they found discussion to be helpful in resolving confusion about evidence, and there was a suggestion in their data that discussion may be most helpful in longer and more complex cases. On balance, Hannaford et al. concluded, as we conclude, that the worst fears of opponents of Rule 39(f) were not supported and that in some cases juror discussions may be helpful.

In sum, our close look at the discussion process revealed evidence for some of the positive features and a few of the negative characteristics reflected in predictions about the effects of the innovation. A number of the predicted differences, both positive and negative, did not materialize at all, although the small sample size meant that we could detect only large effects. Moreover, our analyses suggested that at least some of the problems we observed that were associated with the innovation were not necessary attributes of giving jurors the opportunity to discuss the case during the course of the trial. We address these matters in the next section.

C. Improving the Process

It may be possible to reduce or eliminate most of the negative behaviors that emerged from Rule 39(f) with a number of relatively small changes in procedures. Jury instructions are frequently compressed and consequently less instructive than they might be. A single brief verbal instruction may be insufficient to teach unfamiliar rules to jurors who have little experience in the legal system. At the beginning of the trial, the jurors received an instruction about Rule 39(f) regarding the conditions under which they were permitted to discuss the case, but the instruction was rarely repeated (apart from a cryptic reminder to "remember the admonition"). Unlike the written copy of final jury instructions on the law that the jurors received before they began deliberations, the jurors never received a written copy of the admonition. The instruction on discussions could easily be reinforced by the judge and posted prominently in the jury room during the trial as a reminder.

Similarly, jurors learned during the course of the trial that the timing of the questions they submitted to the judge could affect their ability to receive an answer. If the relevant witness had already been excused, the witness was no longer available to address the juror's concern. An instruction at the beginning of the trial about tailoring

120. *Id.*

questions to the knowledge of the witness on the stand might have improved the timing of juror questioning.¹²¹

One additional feature of the Discuss juries may have affected their adherence to the court's instructions. Jurors are not told to select a presiding juror until the trial ends and they are sent to the jury room to begin their deliberations. Thus, throughout the trial, the Discuss juries had no official leader to take any particular responsibility for ensuring that, for example, all jurors were present when discussions took place. In addition, jurors during discussions sometimes engaged in separate side-conversations, which they rarely did during deliberations. One solution would be to select an interim presiding juror for the discussion periods at the beginning of the trial. In this way, rules would be more likely to be monitored because there would be one juror who had that responsibility. The court could emphasize that this interim presiding juror is only a temporary discussion leader and that the jurors will be choosing a presiding juror for their deliberations. Distinguishing the selection of the temporary discussion leader from the selection of the presiding juror for deliberations would permit the jurors to become better acquainted before choosing the latter. In addition, if it turned out that the discussion leader was later selected as the alternate and excused from jury deliberations, the jury would suffer no loss in leadership. One potential limitation of this procedure is that the jury would have limited information to inform selection of the interim discussion leader, and some juries might be inclined to retain this interim leader as the presiding juror for deliberations merely as a result of inertia. However, the judge's instructions would facilitate the selection of a new presiding juror for deliberations if the discussions led jurors to prefer someone else in that role.

Early verdict statements made during discussions are a more difficult problem. They are a serious concern for those who are wary about juror discussions, although interpreting what they represent is complex. It is unclear how many of these expressions reflected unchangeable final judgments. Moreover, we do not know how many of the early verdict expressions were perceived by other jurors as definitive or influenced their own openness to later evidence in the case.

Early verdict statements themselves may arise for a number of reasons. They may represent strongly held positions about the appropriate verdict. Alternatively, some verdict positions may naturally flow from discussion about a particular witness or other piece of evidence (e.g., a negative evaluation of the credibility of the plaintiff). In addition, some verdict expressions probably arise merely because jurors are not paying attention to the admonition. One possible way to ensure that the jurors are reminded of the admonition would be to display the instruction prominently in the jury room along with the reminder to discuss the case only when all of the jurors are present. It is difficult to think of a downside to this simple suggestion.

Ultimately, like many other proposals for change, the innovation permitting jurors to discuss the case during trial has both desirable and undesirable features. Policymakers considering whether to adopt the discussion innovation will have to

121. One other behavior that occurred in both discussions and in deliberations suggests the need for further instructions. On a few occasions, jurors used their cell phones in the jury room, preventing some jurors from participating fully, or even being exposed to, conversations taking place among their fellow jurors.

weigh these costs and benefits in reaching their decisions. In light of the evidence that the effects are modest, different decisions can be justified. For example, evidence that jurors use the discussion occasions to clarify their recall and understanding of the evidence and that they value the opportunity to discuss the case in the course of the trial may convince some decision-makers that the innovation should be supported. Evidence that verdict statements were made during discussions by some jurors, even in the absence of clear evidence that they affected trial outcomes, may persuade others that the innovation should not be implemented. Moreover, the choice is not simply a binary one, that is, whether to allow or forbid discussion. For example, since juror recall of the evidence is generally strong in short cases, the judge faced with a long and complex case might be given the discretion to permit discussions, or allowing discussion might be automatic in trials expected to last more than a week. We anticipate that the data presented here can assist policymakers in considering whether to implement the discussion innovation in their jurisdictions.

IX. APPENDIX

CASE COMPARISONS
(N = 42 Random Assignment Cases)

Table A.1
Case Characteristics

	Discuss (30)	No Discuss (12)
Motor Vehicle Tort	63%	58%
Other Tort	33%	25%
Contract	3%	17%
	99%	100%

Table A.2
Party Characteristics

	Discuss (30)	No Discuss (12)
Plaintiffs		
% Individuals	100%	92%
% Businesses	0%	8%
	100%	100%
Defendants		
% Individuals	70%	83%
% Businesses	23%	8%
% Individ. & Business	7%	8%
	100%	99%

Table A.3
Case Claims

	Discuss (30)	No Discuss (12)
Some liability admitted	10%	25%
Negligence but not liability admitted	37%	42%
Negligence and liability contested	53%	33%

Table A.4
Ease of Comprehension (1 = very difficult, 7 = very easy)

	Discuss Mean (n)	No Discuss Mean (n)
Ease in comprehending evidence	5.33 (30)	5.91 (11)
Ease in comprehending expert(s)	5.04 (26)	5.44 (9)
Ease in comprehending instructions	5.43 (30)	5.36 (11)

Table A.5
Rating of Attorneys (1 = did a very poor job, 7 = did a very good job)

	Discuss Mean (n)	No Discuss Mean (n)
Ratings of plaintiff's attorney	4.33 (30)	4.73 (11)
Rating of defendant's attorney	4.53 (30)	4.36 (11)

Table A.6
Evidence Characteristics

	Discuss (30)	No Discuss (12)
Number of Plaintiffs	1.53	1.25
Number of Defendants	2.03	1.92
Number of Plaintiff's Witnesses	5.27	5.08
Number of Defense Witnesses	2.60	2.92
Number of Plaintiff's Experts	0.52	0.33
Number of Defense Experts	0.83	0.75
% of Cases with Opposing Experts	27%	17%
Number of Plaintiff's Exhibits	15.07	14.58
Number of Defense Exhibits	6.27	7.25