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Effects of the Dynamite Charge on the Deliberations of Deadlocked Mock Juries*

Vicki L. Smith† and Saul M. Kassir‡

When juries report that they are deadlocked, judges often deliver the dynamite charge, a supplemental instruction that urges jurors to rethink their views in an effort to reach a unanimous verdict. The present study evaluated the impact of this procedure on 378 subjects who participated in 63 deadlocked mock juries. Results indicated that the dynamite charge caused jurors in the voting minority to feel coerced and change their votes, reduced the pressure felt by those in the majority, and hastened the deliberation process in juries that favored conviction. These findings raise serious questions concerning the use of this controversial charge.

When a jury reports that it is deadlocked, the judge may declare a mistrial or deliver a supplementary instruction that directs the jurors to reconsider each other's views in an effort to reach unanimity. Trial anecdotes suggest this instruction, which was first approved by the U.S. Supreme Court in *Allen v. U.S.* (1896), is effective at blasting deadlocked juries into a verdict—so effective that it has been nicknamed the “dynamite charge” (Marcus, 1978).

The dynamite charge has a long history of controversy. Critics argue that it

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coerces jurors who are in the minority to change their votes by stating that “a dissenting juror should consider whether his doubt was a reasonable one which made no impression upon the minds of so many men, equally honest, equally intelligent with himself” (*Allen v. U.S.*, 1896). Indeed, some courts now prohibit the dynamite charge on the grounds that it misleads jurors into thinking they must reach a verdict, aligns the judge with the majority faction, and asks the group as a whole to consider improper facts (i.e., the numerical division of opinion in the group). In contrast, proponents of the dynamite charge argue that it prevents hung juries by urging dissenters only to consider the arguments of their fellow jurors, not to sacrifice their conscientious beliefs. Based on the assumption that hung juries are caused by stubborn holdouts, many courts have approved the use of the dynamite charge. In its only recent opinion on the issue, the Supreme Court in *Lowenfield v. Phelps* (1988) affirmed the use of this instruction as well and argued that it is not inherently coercive.

Although the impact of the dynamite charge on the decision-making process has long been debated within the legal community, the issue has been virtually ignored by jury researchers. Does this instruction produce unanimity from deadlock and, if so, how? As in other small groups, juries reach their verdicts by two social processes: (1) *informational* influence, in which jurors are truly persuaded or “converted” by discussions of the evidence, arguments, and law; and (2) *normative* influence, in which jurors are motivated to conform in order to avoid social rejection (Asch, 1956; Deutsch & Gerard, 1955). These processes may have different outcomes: informational influence results in the private acceptance of a majority’s position, while normative influences elicit public compliance, producing unanimity that may be more apparent than real.

In the ideal, jury verdicts should follow from a vigorous exchange of information and a minimum of coercion. In the words of the Supreme Court: “The very object of the jury system is to secure unanimity by a comparison of views . . . the verdict must be the verdict of each individual juror, not a mere acquiescence in the conclusion of his fellows” (*Allen v. United States*, 1896, pp. 501–502; see also *Williams v. Florida*, 1970). In its pure form, this ideal is seldom realized. Recent conformity studies (Campbell & Fairey, 1989) and mock jury research indicate that unanimity is achieved by a combination of informational and normative influences (Kaplan & Miller, 1983; Stasser, Kerr, & Bray, 1982) and that the latter is heightened in groups that discuss questions of values (Kaplan & Miller, 1987) or deliberate under a nonunanimous decision rule (Hastie, Penrod, & Pennington, 1983).

Does the dynamite charge produce verdicts in deadlocked juries and, if so, what is the process? Since the instruction does not offer new information or perspectives on a case, and since it calls on dissenters to reconsider their positions precisely because they are in the minority, it is possible that the instruction alters behavior by increasing the salience of the norms within the group (Cialdini, Kallgren, & Reno, 1991). If this analysis is correct, then the dynamite charge may operate by (1) empowering the majority, increasing its use of normative influence strategies, and (2) increasing the pressure felt by those in the minority, causing them to change their votes.

Kassin, Smith, and Tulloch (1990) recently conducted an experiment to test these hypotheses. In that experiment, mock jurors in a tax evasion case were led to believe that they were deliberating with three others by passing notes (actually, they participated alone). By random assignment, subjects were placed in the majority or minority faction of a 3-to-1 split. Then they supposedly communicated via the experimenter until seven rounds of notes had been exchanged or until a unanimous verdict was reached. After the third round of notes, half of the subjects received a dynamite charge, and half did not. Results indicated that the instruction led jurors in the minority to feel coerced and to change their votes, while leading those in the majority to exert increasing amounts of social pressure within their notes.

The present experiment was designed with three goals in mind. First, we wanted to assess the impact of the dynamite charge on the perceptions and behavior of deliberating mock juries. Kassin et al.'s (1990) study provided strong initial support for our analysis of the dynamite charge, but it used an artificial note-passing paradigm. On the one hand, it could be argued that a supplemental instruction would add little to the pressures that already exist within a real group. On the other hand, it could be argued that the instruction would increase the pressure applied by the majority. In light of the important practical implications, it is necessary to assess the impact of the dynamite charge on the deliberations of six-person mock juries. As before, we predicted that the dynamite charge would cause minority, but not majority, jurors to feel pressured and to change their votes at a higher rate than control jurors.

Our second objective was to examine the process by which the dynamite charge coerces individuals to change their votes. In the note-passing study, minority jurors claimed they experienced more pressure from their peers than did those in the control group. The notes provided in both groups were identical, however, so these subjects had only imagined peer pressures that did not exist. Since majority jurors in real groups may actually exert more pressure on dissenters, there are two possible "routes" through which the dynamite charge can operate: (1) a direct route, in which the instruction itself leads the dissenters to feel pressured by the judge and/or other jurors, and (2) an indirect route, in which the instruction heightens the pressures actually placed on dissenters by those in the majority. By recording deliberations and analyzing their informational and normative content, we sought to evaluate these possibilities. We predicted that informational influences would decline as the deliberation wore on and that this pattern would be more pronounced in dynamite than control juries. We also predicted that majority jurors might use the dynamite charge to pressure those in the minority.

The third goal of the present research was to evaluate a possible procedural alternative to the dynamite charge. Despite the ideal that verdicts be achieved by informational influence, the note-passing study revealed that the number of informational arguments that were made dropped over the course of deliberation, especially in the dynamite condition. With this result in mind, we sought an intervention that would prompt deadlocked juries to reach a verdict by refocusing their attention on the evidence and arguments. In 1968, the American Bar Asso-

ciation drafted a charge that calls on all jurors to reconsider opposing points of view but not to vote against their true beliefs. The ABA charge does not single out minority jurors, making it the preferred instruction in some courts (e.g., *U.S. v. Smith*, 1988; *U.S. v. Dorsey*, 1989), but it does not provide jurors an informational basis for tipping the existing balance of persuasive arguments. We thus proposed and evaluated a different form of intervention: providing deadlocked juries with a copy of the trial transcript. The goal of this intervention was to keep the jury's discussion focused on the evidence, thus maintaining the level of informational influence. We hoped this intervention would promote unanimity without increasing normative pressure.

METHOD

Overview

For each trial simulation, 12 subjects read a transcript of an aggravated assault trial and indicated their predeliberation verdict preferences. Based on these initial responses, six-person juries were constructed that were stacked 4-to-2 in favor of either conviction or acquittal. Jurors then deliberated while the remaining subjects observed the discussion on a TV monitor in an adjacent room. The discussions were videotaped for content coding. After 20 min of deliberation, one third of the juries received the dynamite charge, and a second third received a transcript of the trial. The remaining juries deliberated without interruption. Deliberations continued until the jury reached a unanimous verdict, or until 50 min had elapsed. At that point, jurors reported on their perceptions of the other jurors, the deliberation process, and the experimental intervention.

Subjects

A total of 1,011 undergraduates participated in this study. Some were introductory psychology students fulfilling a course requirement. Others were recruited by campus-wide advertisements and paid \$8. Subjects took part in a 3 (dynamite, transcript, control conditions) \times 2 (jury stacked for conviction or acquittal) \times 2 (majority or minority faction) mixed design.

Stimulus Trial

Subjects read a 16-page transcript of an aggravated assault trial, *Adams v. Illinois*. The transcript contained opening statements, the examination of witnesses, closing arguments, and judge's instructions. This case was adapted from one originally created by Walker, Thibaut, and Andreoli (1972), and was edited to elicit variability in verdicts (pretesting yielded a 53% conviction rate). In this case, the victim, Michael Zemp, owed money to the defendant, Samuel Adams. The two men met at a bar to discuss the debt and a loud argument broke out. Zemp said he leaned against a table and it accidentally knocked Adams off his chair. Adams then allegedly got up, yelled at Zemp, and stabbed him twice in the

stomach with a piece of broken glass, causing a serious injury. Adams said that he was afraid of being attacked, so he stabbed Zemp in self-defense.

Procedure

For each experimental session, 12 subjects were recruited (actual group sizes ranged from 6 to 12 due to subject no-shows). All subjects read the trial transcript and indicated their predeliberation verdict preferences on a questionnaire. Based on these preferences, a six-person jury was assembled, with the remaining subjects serving as observers. Jurors were randomly selected from the participants in a given session, with the constraint that the jury be stacked 4-to-2 in favor of conviction or acquittal according to a random schedule. Because we were studying deadlocked juries, it was necessary to ensure that there be predeliberation disagreement. Stacking the groups thus enabled us to compare the impact of the dynamite charge on groups favoring conviction versus acquittal.

The jury room contained a table and six chairs, two on each side of the table, and one at each end. There was a video camera on top of a cabinet in the corner of the room—out of the way, but not out of sight. A surface microphone was located in the center of the table. The experimenter explained to jurors that they would deliberate and that their deliberation would be videotaped (they were not aware until debriefing that they were also observed by the other subjects). The experimenter told subjects to select a foreperson and reminded them that their verdict had to be unanimous.

Overall, 63 mock juries (378 jurors, 186 observers) took part in the experiment. Groups were considered deadlocked after 20 min of deliberation, at which point the experimenter intervened. This criterion was established through pretesting, which revealed that after 20 min of discussion on this case, most juries had recounted all major facts and arguments but had not agreed on a verdict. At that point, one third of the juries received a dynamite instruction patterned after the Allen charge (*Allen v. United States*, 1896):

As you know, the verdict requires a unanimous decision, which has not yet been reached. The verdict must take into account the views of each individual juror, and should not represent the mere acquiescence of an individual to his or her peers. Each of you should examine the question for your consideration with candor and with a proper regard and deference to the opinions of each other. As it is your duty to decide the case if you can conscientiously do so, you should listen, with a disposition to be convinced, to each others' arguments. If most members of the jury are for conviction, a dissenting juror should consider whether his or her doubt is a reasonable one, considering that it made no impression upon the minds of so many other equally honest and intelligent jurors. If, on the other hand, the majority is for acquittal, the minority ought to ask themselves whether they might not reasonably doubt the correctness of a judgment which is not concurred in by the majority.

Another third of the juries were provided with copies of the trial transcript and heard the following instruction:

As you know, the verdict requires a unanimous decision, which has not yet been reached. In order to help you in your deliberation on the facts and law, I will give each

of you a copy of the transcript of this case. You may refer to this transcript throughout the remainder of your deliberation.

The remaining 21 juries deliberated without interruption and served as the control group. Juries were randomly assigned to instruction condition, and deliberations continued until a unanimous verdict was reached or until 50 min had elapsed. Subjects then completed questionnaires and were fully debriefed.

Dependent Measures

Two types of data were collected: (1) self-report measures of the deliberation process, most notably, ratings of perceived pressure; and (2) behavioral measures derived from the videotaped deliberations.

On the postdeliberation questionnaire, subjects rated how much pressure they had experienced—overall, from the judge's instruction (i.e., in the dynamite and transcript groups), and within each 10-min segment of deliberation. Subjects also indicated what verdict they favored and rated their confidence both in the jury's decision and in their own opinions of the case. Next, they rated how satisfied they were with the deliberation, how receptive other jurors had been to their arguments, how informative the other jurors' arguments were, how carefully those in the majority and minority had considered the case, and how effectively the deliberation brought out the relevant facts and law. They also rated how eager the experimenter was for a unanimous decision and how willing they were to participate in another jury study. All ratings were made on 7-point scales. Evaluations of the deliberations were also obtained from observers, but these data are not reported in this article.

Supplementing these self-report evaluations were several objective measures derived from the videotaped deliberations. These measures were deliberation time, changes in voting patterns, and the use of normative and informational influence strategies. The system used for coding these data will be described later.

RESULTS

Eleven sessions were discontinued because the jury could not be stacked as desired. An additional 38 juries were dismissed because they reached a unanimous verdict in less than 20 min. This procedure resulted in a self-selection bias, but one that operates in real trials as well (i.e., juries that reach a quick verdict do not receive a dynamite charge). A total of 63 juries ultimately received the instruction manipulation. Compared to subjects who participated on deadlocked juries, those on excluded juries were more satisfied with the deliberation (M 's = 5.6 and 4.9), $F(1,99) = 16.95$, $p < .001$, and reported feeling less pressure to change their votes (M 's = 2.6 and 3.1), $F(1,99) = 16.43$, $p < .001$. They also believed that their fellow jurors were more receptive to their arguments (M 's = 5.6 and 4.9), $F(1,99) = 24.5$, $p < .0001$, and that the experimenter was more eager for the jury to reach a verdict (M 's = 3.7 and 2.9), $F(1,99) = 20.07$, $p < .0001$.

Of the 63 deadlocked juries that participated in this study, 34 (54%) reached a verdict within the 50-min limit—verdicts that were not affected by instruction, $\chi^2(4) = 4.28$, n.s. Not surprisingly, the direction in which the jury was stacked had a strong effect on its final verdict, $\chi^2(2) = 11.9$; $p < .01$. When the predeliberation majority favored conviction, there were 14 guilty verdicts (44%), 4 not guilty verdicts (12%), and 14 hung juries (44%). When the initial majority favored acquittal, there were 3 guilty verdicts (10%), 13 not guilty verdicts (42%), and 15 hung juries (48%).

The Deliberation Process

Voting Behavior

Instances of vote changes, and normative and informational influences, were derived from the videotapes by three independent coders. Preliminary reliability checks on two full juries indicated that the coders were 100% reliable at recording vote changes, but less than perfect on categorizing statements as normative and informational. The coding responsibilities were thus divided such that one coder recorded votes, while the others were further trained to identify instances of informational and normative influence (to be described later).

Each juror's initial verdict preference was obtained from the predeliberation questionnaires. Vote changes were coded whenever a juror explicitly stated a preference contrary to his or her previous position. Two types of statements indicated a change in vote: (1) direct expressions of guilt or innocence (e.g., "I think he's guilty," "I vote not guilty," or "I think it was self-defense"); and (2) negations of these same positions (e.g., "I can't say not guilty anymore" or "I don't think he's guilty"). Suggestions that a juror might change his or her mind (e.g., "I guess I could go along with that") and ambiguous statements of agreement or disagreement (e.g., "I basically agree") were not coded as vote changes because they did not clearly indicate acceptance or rejection of a specific verdict.

The latency to each vote change was recorded and the number of changes within each 10-min segment of deliberation was computed for each jury. The mean numbers of vote changes for the majority and minority factions were calculated separately, as shown in Table 1. Based on the results of the note-passing study, we predicted that minority jurors who received the dynamite charge would change their votes more frequently in the 10-min segment immediately following the instruction. If the dynamite charge is coercive, minority jurors in this group should show a significant and immediate increase in vote changes relative to those

Table 1. Mean Number of Vote Changes in Each Segment of Deliberation

	Majority					Minority				
	1–10	11–20	21–30	31–40	41–50	1–10	11–20	21–30	31–40	41–50
Dynamite	0.10	0.14	0.33	0.31	0.25	0.0	0.10	0.71	0.62	0.13
Control	0.14	0.05	0.38	0.29	0.10	0.1	0.24	0.29	0.71	0.20
Transcript	0.00	0.14	0.00	0.16	0.25	0.0	0.24	0.10	0.26	0.38

in the control group. To test this hypothesis, an Instruction \times Faction \times Segment ANOVA was conducted on voting in the segments immediately before and after the charge (i.e., 11–20 min, 21–30 min). In this analysis, instruction was a between-jury factor and segment and faction were within-jury factors (faction was treated as a within-jury factor because the behaviors of majority and minority jurors within a group are not statistically independent). As predicted, this analysis revealed a significant Instruction \times Segment interaction, $F(2,60) = 4.15$, $p < .05$. Injuries that received the dynamite charge, vote changes increased significantly from one segment to the next (.12 at 11–20 min, .52 at 21–30 min), $F(1,20) = 6.37$, $p < .05$. In control groupjuries, the increase was small and nonsignificant (.14 to .33), $F(1,20) = 1.56$, n.s. Injuries that received a trial transcript, there was an unexpected marginally significant decrease in vote changes (.19 to .05), $F(1,20) = 3.33$, $p < .10$.

If the dynamite charge selectively pressures jurors in the voting minority, this Instruction \times Segment interaction should be significant only in the minority faction. As predicted, separate two-way ANOVAs for each faction revealed that the Instruction \times Segment interaction was significant for minority jurors, $F(2,60) = 4.66$, $p < .02$, but not for those in the majority, $F(2,60) = 1.69$, n.s. As shown in Figure 1, the dynamite charge did not affect majority jurors, but it did cause changes in voting among those in the minority relative to the control group.¹ We had hoped that the transcript procedure would elicit changes in voting without bringing high levels of normative pressure to bear on jurors in the minority. However, there were actually somewhat fewer vote changes following this interven-

¹ It could be argued that the three-way interaction term from the Instruction \times Faction \times Segment ANOVA is relevant to the majority–minority differences we predicted. The omnibus analysis does not test the particular three-way interaction in question, however, so we conducted contrast analyses on the vote change data to test our specific predictions (Rosenthal & Rosnow, 1985). First, an Instruction \times Faction \times Segment contrast tested the hypothesis that the minority–dynamite and minority–transcript jurors would vote guilty at a higher rate in the 21–30-min segment (right after the charge) than in the 11–20-min segment (right before the charge), whereas the minority–control and majority jurors would not exhibit such an increase. This interaction was significant, $F(1,60) = 5.50$, $p < .05$. Second, contrasts testing this interaction were conducted separately for the dynamite and transcript conditions to determine if these interventions had the same impact on vote changes. One contrast tested for vote changes among minority–transcript jurors relative to majority–transcript and majority and minority controls. This contrast did not approach significance, $F < 1$, indicating that the transcript intervention did not movejuries toward unanimity. The other contrast tested for increased vote changes among minority–dynamite jurors relative to majority–dynamite and majority and minority controls. This contrast was highly significant, $F(1,40) = 9.38$, $p < .005$, indicating that the dynamite charge did movejuries toward unanimity relative to controls. Separate follow-up contrasts were conducted to determine whether majority and minority jurors were impacted in the same way by the dynamite charge. One Instruction \times Segment contrast tested for increased vote changes across segments for majority–dynamite but not for majority–control jurors. This contrast did not approach significance, $F < 1$; as predicted, the dynamite charge did not prompt majority jurors to change their votes at a higher rate than controls. The other Instruction \times Segment contrast tested for an increase in vote changes across segments for minority–dynamite jurors. This contrast was highly significant, $F(1,40) = 9.44$, $p < .005$, indicating that the dynamite charge did prompt minority jurors to change their votes at a higher rate than controls. These analyses are thus highly consistent with the ANOVAs reported in the text.

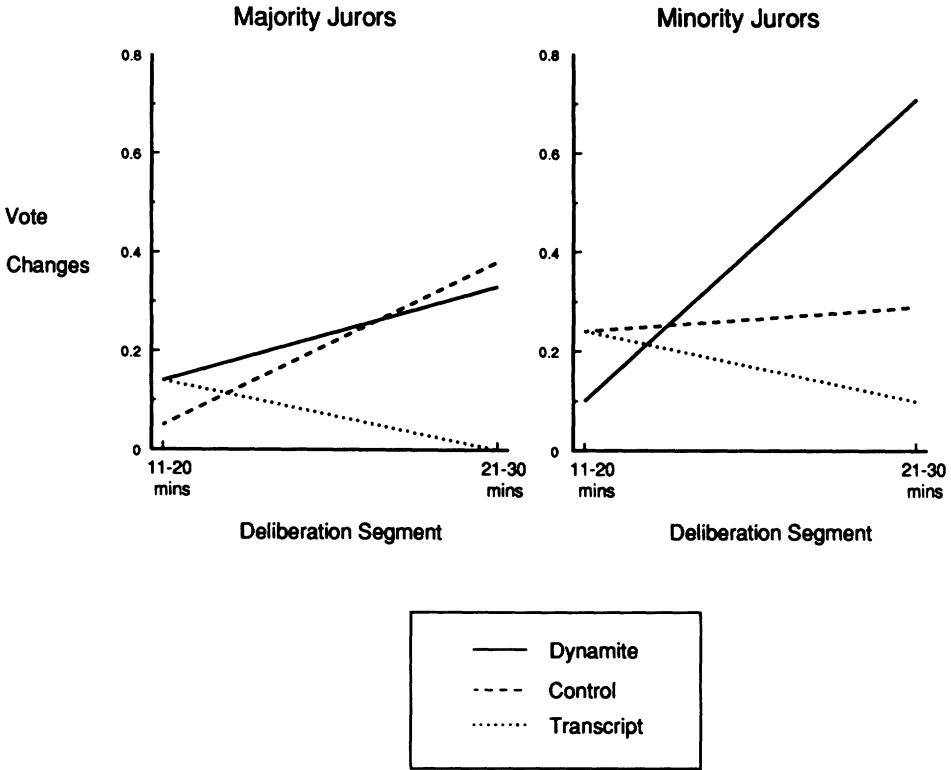


Fig. 1. Mean number of vote changes for majority and minority jurors in the deliberation segments immediately prior to (11–20 min) and immediately following (21–30 min) the experimental intervention.

tion. Videotapes of the deliberations revealed that this decline was due to the fact that jurors tended to page through the transcripts and quote individual pieces of evidence during this segment, rather than integrate information and discuss the case as a whole. Indeed, the rate of vote changes in the transcript condition rebounded to its former level in later segments of deliberation, though it did not effectively move deadlocked juries toward a verdict (see Table 1).²

² Table 1 shows that for minority members of control juries, vote changes increased later in deliberation, in the 31–40-min segment (during which the rate of vote changes in the dynamite condition was also high). Thus it was important to determine whether the increase in vote changes that occurred in the dynamite group in the 21–30 min segment reflected general differences in deliberation before versus after the supplementary instruction, or whether the impact of the charge was short-lived. We computed a mean vote change score for all segments preceding the supplementary instructions (segments 1–10 and 11–20), and one for all available segments following the supplementary charge (segments 21–30, 31–40, and 41–50, depending on how long the jury deliberated). An Instruction \times Faction \times Time (early vs. late segments) ANOVA revealed a significant Instruction \times Time interaction, $F(2,60) = 3.80, p < .05$. The largest increase in vote changes occurred in the dynamite condition (.08 to .62), followed by the control (.13 to .42) and transcript (.10 to .21) conditions. If the dynamite charge selectively pressures the minority, this Instruction \times Time interaction should be significant only in the minority faction. As predicted, separate Instruction \times Time ANOVAs for the

Deliberation Time

Because minority jurors in the dynamite condition changed their votes at a higher rate than controls, we expected the former to deliberate for a relatively short period of time. An Instruction \times Stack ANOVA on the deliberation times revealed a significant main effect of instruction (dynamite = 36.6 min, transcript = 45.1 min, control = 39.4 min, $F(2,57) = 3.61$, $p < .05$, and a marginally significant interaction, $F(2,57) = 2.50$, $p < .10$. To examine this interaction, the effects of instruction were tested separately for juries stacked in favor of conviction and acquittal. This analysis indicated that there were no time differences between instruction conditions in juries stacked for acquittal, $F(2,28) = 2.19$, n.s., but there was a significant effect for those favoring conviction, $F(2,29) = 4.48$, $p < .05$. In these latter groups, dynamite juries (34.0 min) spent significantly less time deliberating than either the control (43.8 min) or transcript (44.6 min) juries, which did not differ from each other ($p < .05$, by Newman-Keuls post-hoc comparisons). Although the Instruction \times Stack interaction was not quite significant, it suggests that the dynamite charge may hasten the deliberation process in juries favoring conviction, but not in those favoring acquittal. This possibility should be explored in future research.

Influence Strategies

Normative and informational statements were coded for 37 juries—13 Dynamite, 13 Transcript, and 11 Control. Juries were randomly selected for coding, with the constraint that about half of those in each instruction condition be stacked guilty, and half not guilty. During each 1-min segment of deliberation, coders recorded whether or not informational and normative statements were made (i.e., the presence or absence of such statements, not their frequency). Because the coders worked directly from the videotapes, and not from a written transcript, we could not determine the total number of *utterances* containing informational or normative influence. Coding intervals were thus marked by time, and coders were instructed to record the presence or absence of normative and informational influence within each interval. We then calculated the proportion of 1-min segments in each 10-min period that contained these two categories of statements. These proportions provided rough frequency estimates and were computed separately for the majority and minority factions.

Informational statements were those that cited facts about the case or relevant laws, regardless of accuracy. For example, "Zemp was stabbed three times" is factually incorrect, but was considered an informational statement because its purpose was to persuade others with evidence. In contrast, normative statements were those used to pressure others into changing their votes without additional

majority and minority factions revealed a significant interaction for the minority, $F(2,60) = 3.83$, $p < .05$, but not for the majority, $F(2,60) = 0.60$, n.s. Contrast analyses on the means for early and late segments produced the same pattern of results obtained for the 11–20- versus 21–30-min deliberation segments. Relative to controls, the dynamite charge prompted minority, but not majority, jurors to change their votes, and the transcript intervention did not move juries toward unanimity.

information. Some normative statements were quite direct (e.g., "We've gotta get these guys to switch," and "You're not gonna hold us up, are you?"). Others were more subtle (e.g., the following sentence frames were used to elicit compliance by telling jurors who disagree how they *should* think about the case: "You can't say . . ."; "You can't believe . . ."; and "We all think . . ."). Statements such as "We all think there's a reasonable doubt," were coded as instances of normative influence. Simple statements of one's position (e.g., "I think he's guilty") were coded separately because they are not clearly normative. Their inclusion in the analysis did not alter the results.

Five juries were analyzed in their entirety by both coders. The normative and informational scores generated by each coder were then correlated across the juries. This coding system was highly reliable: informational influence, $r = .90$; normative influence, $r = .88$. Disagreements between coders were resolved by a third person, who was trained in the use of the coding scheme but had not previously participated in the research project.

Normative Influence. If the dynamite charge prompts voting changes by leading jurors in the majority to pressure dissenters, then we should find a higher proportion of normative influence statements by the majority faction. Analyses of these data could not be conducted across all five segments of deliberation because the cell sizes were too small (i.e., only three dynamite juries, nine transcript juries, and four control juries that were coded had deliberated the full 50 min). A three-way ANOVA (Instruction \times Faction \times Segment) was thus performed on all 37 groups for the segments immediately before (11–20 min) and after (21–30 min) the instruction manipulation. On the normative influence measure, this analysis revealed a significant and predictable faction effect, with majority jurors making more normative statements than those in the minority (.33 and .21, respectively), $F(1,34) = 10.70$; $p < .01$. No other main effects or interactions reached significance.³

Informational Influence. We predicted that informational influence would drop after the dynamite charge but increase in the transcript condition, relative to controls. A three-way ANOVA (Instruction \times Faction \times Segment) on these data for the 11–20- and 21–30-min segments revealed a significant faction effect, with majority jurors making more informational statements than those in the minority (.82 and .58, respectively), $F(1,34) = 29.22$; $p < .0001$. Consistent with the note-passing study, a significant segment effect indicated that informational statements decreased across segments (.76 & .64), $F(1,34) = 14.9$; $p < .001$. There was also

³ Contrast analyses corroborated these results; the dynamite charge did not prompt majority jurors to use more normative pressure than controls, $F(1,22) = 1.50$, n.s. For all 37 juries, we also computed means over the early segments (1–10 min and 11–20 min) and whatever late segments were available for each jury (21–30, 31–40, and 41–50 mins, depending on how long the jury deliberated) to see if there was an overall shift in the use of normative statements as a function of instruction. A three-way ANOVA (Instruction \times Faction \times Time) revealed a significant main effect of faction, with majority jurors making more normative statements than minority jurors (.32 and .20, respectively), $F(1,34) = 15.45$; $p < .001$, and a marginally significant main effect of time, with somewhat more normative statements occurring in the *early* segments of deliberation than in the later segments (.29 and .24, respectively), $F(1,134) = 3.93$; $p < .10$. No other effects were significant.

a significant Faction \times Segment interaction, showing larger decreases in informational influence among minority than majority jurors, $F(1,34) = 5.76$; $p < .05$. Most importantly, however, a significant Instruction \times Segment interaction, $F(2,34) = 4.54$; $p < .02$, revealed that both dynamite and control juries exhibited a decline in informational influence immediately following the dynamite charge (dynamite = .78 at 11–20 min and .62 at 21–30 min; control = .80 at 11–20 min and .57 at 21–30 min). This decrease, however, did not occur in juries provided with a transcript (.71 at 11–20 min and .72 at 21–30 min).⁴ Thus, although the transcript intervention did not *increase* the use of informational influence, it appeared to prevent the *decrease* that otherwise occurs.⁵

Self-Reports

The postdeliberation responses of subjects within a jury are not statistically independent, so we computed summary scores for each jury by averaging the individual responses. Separate means for the majority and minority factions were thus computed on each measure and faction was treated as a within-jury factor. The data were analyzed within a 3 (instruction) \times 2 (stack) \times 2 (faction) mixed design.

Global Pressure Ratings

The most important self-report data pertained to subjects' perceptions of the amount of pressure they were under to change their votes. In all conditions,

⁴ Analysis of the means over all early segments (1–10 and 11–20 min) and whatever late segments were available for each jury (21–30, 31–40, and 41–50 min, depending on how long the jury deliberated) revealed a similar pattern of results. There was a significant faction effect, with majority jurors making more informational statements than minority jurors (.80 and .57), $F(1,34) = 40.1$, $p < .0001$. The segment main effect was significant, with more informational statements early than late in deliberation (.77 and .61), $F(1,34) = 23.3$, $p < .0001$. The Faction \times Segment interaction was significant, with larger decreases in informational influence among minority than majority jurors, $F(1,34) = 12.8$, $p < .01$. Most important was the significant Instruction \times Segment interaction, $F(2,34) = 3.37$, $p < .05$. Informational influence decreased from early to late segments in dynamite (.79 to .56), and control (.79 to .57) juries, but remained the same in juries that received a transcript (.74 to .70).

⁵ Contrast analyses were conducted on the informational influence data to test our hypothesis that informational influence would decrease from the 11–20- to the 21–30-min segment in the control condition, decrease even further in the dynamite condition, and increase in the transcript condition. This contrast was significant, $F(1,34) = 8.00$, $p < .01$. Separate tests were then conducted for the dynamite and transcript juries to determine if each intervention had its predicted impact relative to controls. One contrast tested for an increase in informational statements across segments in the transcript condition and a decrease in the control condition—and was significant, $F(1,22) = 8.50$, $p < .01$, indicating that more informational influence occurred in the transcript juries than in controls. The dynamite charge was predicted to further diminish informational influence across segments than in control juries; if this occurred, then in the dynamite condition informational statements would be infrequent in the 21–30-min segment (after the charge) relative to (1) the 11–20-min segment and (2) both segments on the control juries. The contrast testing this hypothesis was not significant, $F(1,22) = 2.00$, n.s., indicating that the dynamite charge did not decrease informational influence relative to controls. These results are consistent with the ANOVAs reported in the text.

subjects reported moderate and equivalent amounts of pressure—both overall (dynamite = 3.4, transcript = 3.2, control = 3.5), $F(2,57) = 0.80$, n.s. and from other jurors (dynamite = 3.3, transcript = 3.2, control = 3.4), $F(2,57) = 0.27$, n.s. As expected, significant faction effects indicated that subjects in the minority reported feeling more pressure than those in the majority—both overall (4.1 and 2.6), $F(1,57) = 22.3$, $p < .001$, and from other jurors (4.1 and 2.5), $F(1,57) = 26.2$, $p < .0001$. Subjects in the dynamite and transcript groups also rated the pressure they felt from the judge's instruction. As predicted, these ratings were higher among subjects who received the dynamite charge than the transcript (M 's = 1.8 and 1.5, respectively), $F(1,38) = 5.32$, $p < .05$.

Were jurors who reported more pressure also more likely to change their votes? To examine this link between self-report and behavior, we computed the correlation within each group between subjects' overall pressure ratings and whether or not they had changed their vote. The correlation coefficient for each jury was then transformed to a z -score and the average z -score across juries was computed for each instruction condition. The average z was tested against zero, then transformed back to a correlation coefficient for reporting in this article. In each condition, vote changes were significantly and highly correlated with perceived pressure: dynamite ($r = .61$), $t(16) = 4.32$, $p < .001$; transcript ($r = .62$), $t(15) = 2.46$, $p < .05$; and control ($r = .58$), $t(18) = 3.94$, $p < .001$. The more pressure jurors reportedly felt, the more likely they were to change their votes.

Segmented Pressure Ratings

Global pressure ratings provide only summary impressions of the whole deliberation and do not assess a juror's subjective experience as deliberation progresses over time. To obtain a more dynamic self-report measure, we also asked subjects to rate the amount of pressure they felt during each 10-min segment of deliberation. We expected that pressure to reach agreement would build over time in both factions of the control and transcript groups, but that minority jurors in the dynamite condition would report the most pressure following the charge. Thus we predicted a three-way interaction, with relatively small increases in pressure for all jurors except those in the minority-dynamite group, who would report a large increase in pressure after the instruction.

Figure 2 shows the mean pressure ratings across deliberation segments reported by majority and minority jurors in each group. An Instruction \times Faction \times Segment ANOVA was performed on the 7 dynamite juries, 16 transcript juries, and 10 control juries that deliberated for the full 50 min. A significant main effect of faction indicated that minority jurors reported feeling more coerced than did those in the majority (M 's = 3.1 and 2.4), $F(1,30) = 7.43$, $p < .02$. There was also a significant main effect of segment, $F(4,120) = 10.21$, $p < .0001$, which was qualified by the predicted three-way interaction, $F(4,120) = 2.07$, $p < .05$. To examine this latter effect, separate one-way ANOVAs were performed across segments for each Faction \times Instruction combination.

For subjects in the *majority*, the control data revealed the predicted significant segment effect, $F(4,36) = 3.48$, $p < .05$ (the largest component of this effect

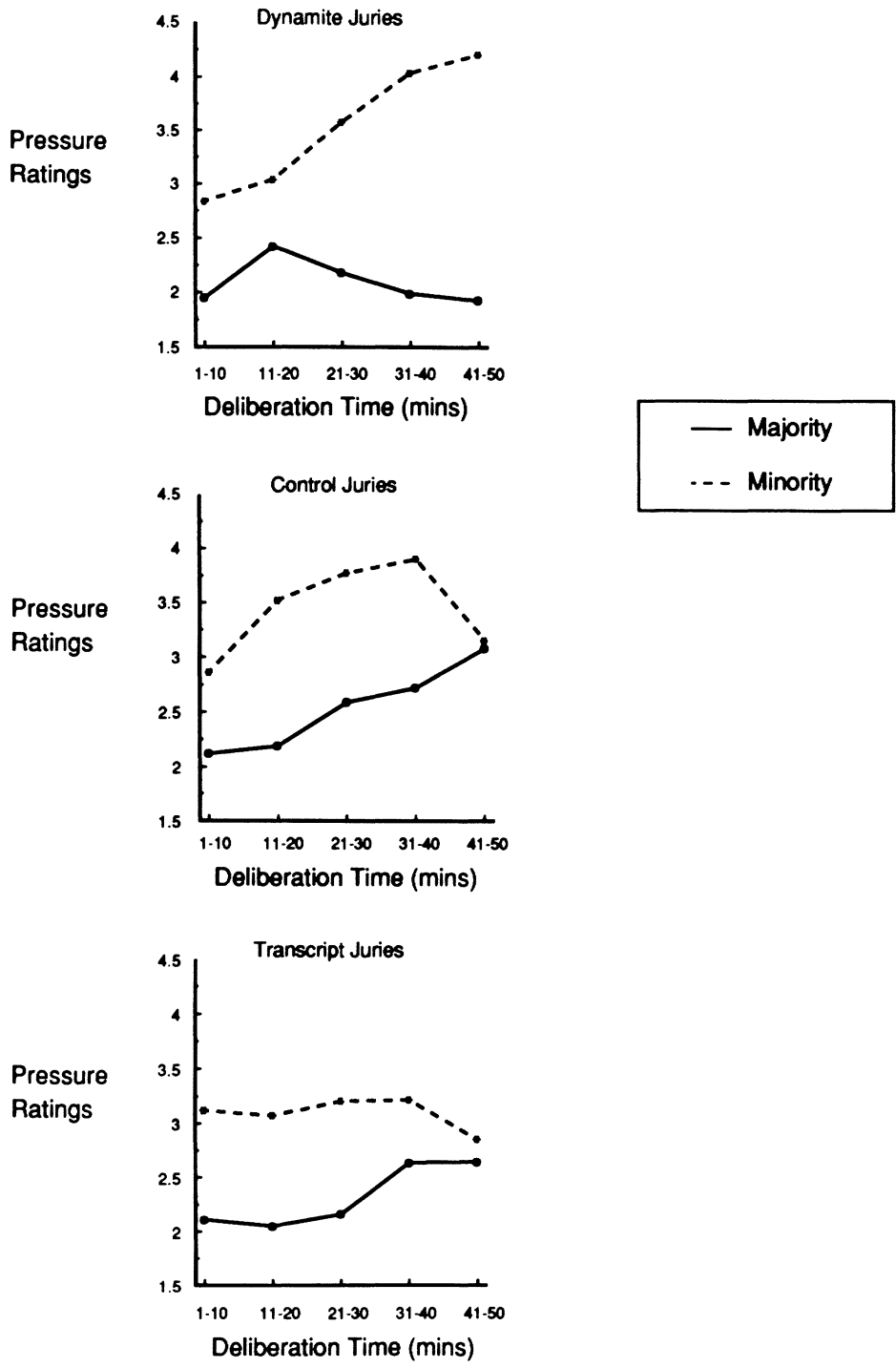


Fig. 2. Jurors' ratings of perceived pressure to change their votes in each segment of deliberation.

was linear, accounting for 87% of the sums of squares), indicating that majority-control jurors reported increasing pressure throughout the deliberation. This segment effect also appeared in the transcript condition, $F(4,60) = 3.77, p < .01$ (the linear component accounted for 86% of the sums of squares), indicating that for these jurors as well, pressure increased over time. A very different pattern emerged in the dynamite condition. Here the segment main effect did not approach significance, $F(4,24) = 0.51$, indicating that there was no increase in pressure across segments for majority jurors in the dynamite condition. In fact, there was a nonsignificant *decrease* in reported pressure after the instruction, 20 min into the deliberation. Apparently, the dynamite charge insulated majority jurors from the build-up of pressure experienced in the other conditions.

Among jurors in the *minority*, pressure ratings did not change significantly across deliberation segments in either the control, $F(4,36) = 0.54$, or transcript conditions, $F(4,60) = 0.11$. For those who received the dynamite charge, however, minority jurors reported a large and significant increase in pressure across the deliberation segments, $F(4,24) = 9.15, p < .001$ (the linear component accounted for 92% of the sums of squares). As shown in Figure 2, the largest increases occurred immediately after the charge (an average of .54 scale points in the 21–30-min segment, and .46 in the 31–40-min segment). In short, the dynamite charge clearly tipped the balance of power within groups, increasing the pressure felt by minority jurors and minimizing that felt by those in the majority.⁶

Additional Measures

Subjects evaluated other aspects of the deliberation process as well. On several measures, their perceptions were affected by the faction they were in. Compared to minority jurors, for example, those in the majority were more confident of their own positions (M 's = 6.0 and 5.7), $F(1,57) = 4.72, p < .05$, and in their jury's verdict (M 's = 6.0 and 5.3), $F(1,28) = 5.47, p < .05$. They also believed that other jurors were more receptive to their arguments (M 's = 5.0 and 4.7), $F(1,57) = 4.03, p < .05$, and that the majority was more careful in its consideration of the evidence (M 's = 5.7 and 5.1), $F(1,57) = 18.8, p < .001$. In

⁶ Once again, contrast analyses corroborated these results. We predicted that minority–dynamite jurors would feel the most pressure to change their votes. A contrast testing for an increase in reported pressure in the 21–30-, 31–40-, and 41–50-min segments for the minority–dynamite jurors was highly significant, $F(1,120) = 104.1, p < .001$. Separate contrasts were then conducted for dynamite and transcript jurors to determine whether both interventions had the same impact on reported pressure relative to controls. The contrast comparing transcript and control juries tested for increased pressure ratings after the intervention among minority–transcript jurors. This contrast was not significant, $F < 1$, indicating that the transcript intervention did not increase felt pressure on the minority jurors. A similar contrast comparing the dynamite and control conditions was highly significant, $F(1,60) = 22.37, p < .001$; minority–dynamite jurors reported feeling increased pressure after the charge relative to majority–dynamite and majority and minority controls. Follow-up contrasts tested separately for increased pressure ratings in the majority and minority factions. Majority–dynamite jurors did not report feeling more pressured after the charge, $F(1,64) = 1.94, n.s.$ As predicted, however, minority–dynamite jurors did feel increased pressure after the charge, $F(1,60) = 8.94, p < .005$. These results are consistent with the analyses reported in the text.

light of these results, it is interesting that minority jurors were not less satisfied in general with the deliberation (M 's = 5.0 and 4.8), $F(1,57) = 1.11$, n.s.

There was one notable effect involving the instruction manipulation: a significant Instruction \times Stack interaction on the question, "How receptive were the other jurors to your arguments?", $F(2,57) = 3.52$; $p < .05$. Consistent with the leniency bias in criminal jury deliberations (MacCoun & Kerr, 1988), subjects in the transcript and control groups rated each other as more receptive when the jury was stacked for acquittal than for conviction (M 's = 4.8 and 4.6 in the transcript groups; M 's = 5.2 and 4.7 in the control group, respectively). In the dynamite condition, however, the reverse pattern was found, as groups stacked in favor of acquittal rated each other as *less* receptive than those favoring conviction (M 's = 4.4 and 5.3, respectively). This suggests that the dynamite charge may short-circuit the usual leniency bias; making the instruction a more potent weapon for prosecutors faced with holdouts for acquittal.

DISCUSSION

The present study was designed to assess the impact on jury deliberations of the dynamite charge, to examine the process by which it effects change, and to test a new, information-based alternative. Consistent with the note-passing study, but in a more realistic context, the dynamite charge moved deadlocked juries toward unanimity, selectively causing minority jurors to change their votes. There was a sharp increase in vote changes among minority jurors who received the dynamite charge, but not among those in the majority. Indeed, several subjects commented openly during deliberations about the selective focus of the charge. As one minority juror put it, "Well that shoots *me* down." Another said that, "Being in the minority I guess I'd better reconsider." Similarly, one majority juror asked of the minority, "What are they saying, since there's four of us and two of you that you're supposed to change your minds?" Many of our subjects were quick to apprehend that the charge targets those in the voting minority.

How does the dynamite charge bring about change? Earlier we suggested two possible "routes" through which it can produce a verdict: (1) a direct route, in which the instruction itself leads dissenters to feel coerced by the judge or other jurors, and (2) an indirect route, in which the instruction operates by heightening the pressures actually exerted by the majority. The note-passing study suggested that both processes were operating. On the one hand, minority jurors in the dynamite condition felt more pressure than did those in the control group even though the notes in both groups were identical—suggesting that the instruction itself was responsible for the added pressure. On the other hand, the dynamite charge did precipitate a steeper decline in informational influence and an immediate increase in normative influence by the majority right after the charge—suggesting that the instruction also operated indirectly by prompting majority jurors to exert more pressure. In the present study, the dynamite charge had only a *direct* effect on minority jurors. This effect is striking, as it was obtained *without*

corresponding changes in the behavior of the majority faction (i.e., dynamite and control juries exchanged equivalent amounts of information and exerted the same low level of normative influence). Perhaps our subjects were reluctant to exert too much pressure in a live interaction lasting for less than an hour. If so, then the dynamite charge may have more impact after days, rather than minutes, of deliberation. Indeed, after long and extensive discussions, majority jurors may be more willing to exploit the judge's instruction to strengthen their hold on the minority. This possibility remains to be explored in future research.

The self-report data revealed that the dynamite charge did increase the pressure felt by minority jurors. As in the note-passing study, minority subjects felt more pressure after the instruction, while majority subjects did not. In fact, the dynamite charge insulated those in the majority from the build-up of pressure experienced by their counterparts in the control group. Again, it is important to keep in mind that the dynamite charge increased the pressure felt by minority jurors and the frequency of their vote changes, two measures that were highly correlated, without increasing actual normative influence. It is also important to keep in mind that the dynamite charge was delivered by low-status student experimenters—not by a judge. Our results may thus underestimate the power of the dynamite instruction to influence juries in the real world.

As an alternative to the dynamite charge, we introduced a transcript intervention designed to break the deadlock by refocusing attention on the evidence. Our goal was to move juries toward unanimity through high levels of informational rather than normative influence. The results of this effort were mixed. On the positive side, the transcript manipulation helped to sustain the level of information exchange throughout the deliberation, compared to the dynamite and control conditions. Transcript jurors also did not feel more pressure to change their votes. At the same time, however, the transcript did not facilitate the drive toward unanimity, as vote changes were no more frequent in this condition than in the no-instruction control group.

At this point, the two existing studies of the dynamite charge yield remarkably consistent results, even though very different paradigms were used. Kassir et al.'s (1990) experiment used a contrived note-passing procedure, while the present study used six-person mock juries. In both situations, the dynamite charge led subjects in the minority alone to feel pressured and to change their votes. These results thus raise serious questions about the use of this supplemental instruction as a means of moving deadlocked juries toward a verdict.

At present, we do not know what aspects of the dynamite charge or the context of its presentation are responsible for the effects obtained in these experiments. Specifically, there are three issues that should be addressed in future research. First, what is it about the dynamite instruction that causes jurors to change their votes? Much of the debate within the legal community has focused on the language and content of the instruction, with some courts using the *Allen* charge, and others proposing their own versions. In *U.S. v. Smith* (1988), for example, the Tenth Circuit recommended an instruction that calls upon all jurors, not just those in the minority, to reflect on their positions. Then in *U.S. v. Dorsey* (1989), the D.C. Circuit required the use of a similarly modified charge. It remains

to be seen whether these alternatives have the same impact or whether they produce verdicts without coercion.

A second issue concerns the context in which the dynamite charge is delivered. Some courts have ruled that it is improper as a supplementary instruction delivered after deliberation has begun, but that it can be included in a judge's predeliberation instructions. Others approve not only the delivery of the charge, but its rereading if a verdict is still not forthcoming (Notes and Comments, 1968). In the recent drug trial of former Washington D.C. Mayor Marion Barry, the jury deliberated for 8 days, then told the judge that they were at an impasse on some of the charges. At 4:45 on Friday afternoon, the judge delivered a dynamite charge and instructed the jury to determine if further deliberations the following week would be fruitful. Six minutes later, the jury returned with a unanimous judgment that further deliberations would not produce a verdict, leading the judge to declare a mistrial on those counts. Critics of this case argue that the judge defused the dynamite charge by permitting the jury to terminate its deliberation. As one attorney put it: "He gave them a way out, which completely defeated the purpose of the charge" (Gellman & Walsh, 1990; Shenon, 1990). Presumably, this kind of contextual variation could mediate the instruction's influence. Indeed, the Supreme Court recently approved the dynamite charge but warned that certain types of supplementary instructions and polling procedures might be ruled impermissible (*Lowenfield v. Phelps*, 1988). The Court did not specify what situational factors would be important for making this judgment.

A third important question is whether the dynamite charge has more impact in some kinds of trials than in others. Kaplan and Miller (1987) found that normative pressures predominate in groups that discuss questions of values and personal standards, whereas informational influence is more important in groups that decide on issues of fact (see also Kaplan, 1989). This suggests the possibility that juries may be particularly susceptible to the coercive implications of the dynamite charge in cases that involve community and moral standards (e.g., those that involve obscenity, abortion, police brutality, euthanasia, or political dissent).

REFERENCES

- Allen v. United States, 164 U.S. 492 (1986).
- American Bar Association Project on Minimum Standards for Criminal Justice (1968). *Standards relating to trial by jury*, Standard 5.4.
- Asch, S. E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. *Psychological Monographs*, 70, 416.
- Campbell, J. D., & Fairey, P. J. (1989). Informational and normative routes to conformity: The effect of faction size as a function of norm extremity and attention to the stimulus. *Journal of Personality and Social Psychology*, 57, 457-468.
- Cialdini, R. B., Kallgren, C. A., & Reno, R. R. (1991). A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. *Advances in Experimental Social Psychology*, 24, 201-234.
- Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influence upon individual judgment. *Journal of Abnormal and Social Psychology*, 51, 629-636.

- Gellman, B., & Walsh, R. (1990, August 11). Experts say judge gave instructions cautiously. *The Washington Post*, p. A13.
- Hastie, R., Penrod, S. D., & Pennington, N. (1983). *Inside the jury*. Cambridge, MA: Harvard University Press.
- Kaplan, M. F. (1989). Task, situational, and personal determinants of influence process in group decision-making. *Advances in Group Processes*, 6, 87–105.
- Kaplan, M. F., & Miller, C. E. (1983). Group discussion and judgment. In P. Paulus (Ed.), *Basic group processes* (pp. 65–94). New York: Springer-Verlag.
- Kaplan, M. F., & Miller, C. E. (1987). Group decision making and normative versus informational influence: Effects of type of issue and assigned decision rule. *Journal of Personality and Social Psychology*, 53, 306–313.
- Kassin, S. M., Smith, V. L., & Tulloch, W. F. (1990). The dynamite charge: Effects on the perceptions and deliberation behavior of mock jurors. *Law and Human Behavior*, 14, 537–550.
- Lowenfield v. Phelps, 108 S. Ct. 546 (1988).
- MacCoun, R. J., & Kerr, N. L. (1988). Asymmetric influence in mock jury deliberation: Jurors' bias for leniency. *Journal of Personality and Social Psychology*, 54, 21–33.
- Marcus, P. (1978). The Allen instruction in criminal cases: Is the dynamite charge about to be permanently defused? *Missouri Law Review*, 43, 613–641.
- Notes and comments: On instructing deadlocked juries (1968). *Yale Law Journal*, 78, 100–142.
- Rosenthal, R., & Rosnow, R. L. (1985). *Contrast analysis: Focused comparisons in the analysis of variance*. London: Cambridge University Press.
- Shenon, P. (1990, August 17). Judge in Barry's trial is criticized in debate over dismissal of the jury. *The New York Times*, p. B5.
- Stasser, G., Kerr, N. L., & Bray, R. M. (1982). The social psychology of jury deliberations: Structure, process, and product. In N. Kerr & R. Bray (Eds.), *The psychology of the courtroom*. New York: Academic Press.
- United States v. Dorsey, 865 F.2d 1275 (1989).
- United States v. Smith, 857 F.2d 682 (1988).
- Walker, L., Thibaut, J., & Andreoli, V. (1972). Order of presentation at trial. *The Yale Law Journal*, 82, 216–226.
- Williams v. Florida, 399 U.S. 78 (1970).